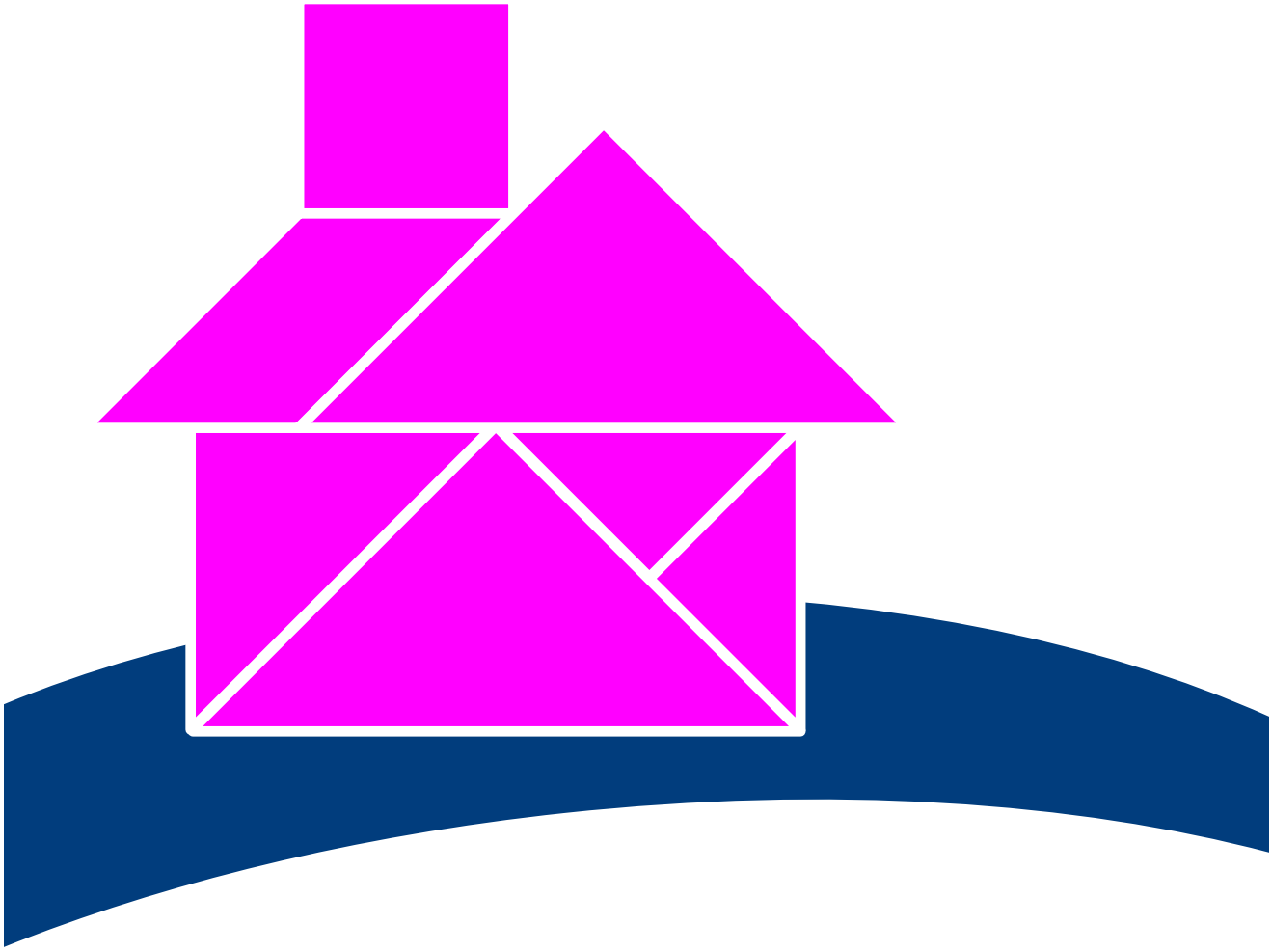
BRIDGES®
IN MATHEMATICS



SECOND EDITION

HOME CONNECTIONS

ANSWER KEY

GRADE 3

Published by The MATH LEARNING CENTER Salem, Oregon

Bridges in Mathematics Second Edition Grade 3 Home Connections

The Bridges in Mathematics Grade 3 package consists of:

- Bridges in Mathematics Grade 3 Teachers Guide Units 1–8
- Bridges in Mathematics Grade 3 Assessment Guide
- *Bridges in Mathematics Grade 3 Teacher Masters*
- Bridges in Mathematics Grade 3 Student Book
- Bridges in Mathematics Grade 3 Home Connections
- *Bridges in Mathematics Grade 3 Teacher Masters Answer Key*
- *Bridges in Mathematics Grade 3 Student Book Answer Key*
- *Bridges in Mathematics Grade 3 Home Connections Answer Key*
- Bridges in Mathematics Grade 3 Components & Manipulatives
- *Bridges Educator Site*
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- Number Corner Grade 3 Teachers Guide Volumes 1–3
- *Number Corner Grade 3 Teacher Masters*
- Number Corner Grade 3 Student Book
- *Number Corner Grade 3 Teacher Masters Answer Key*
- *Number Corner Grade 3 Student Book Answer Key*
- Number Corner Grade 3 Components & Manipulatives
- Word Resource Cards

Digital resources noted in italics.

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Bridges in Mathematics is a standards-based K–5 curriculum that provides a unique blend of concept development and skills practice in the context of problem solving. It incorporates Number Corner, a collection of daily skill-building activities for students.

The Math Learning Center is a nonprofit organization serving the education community. Our mission is to inspire and enable individuals to discover and develop their mathematical confidence and ability. We offer innovative and standards-based professional development, curriculum, materials, and resources to support learning and teaching. To find out more, visit us at www.mathlearningcenter.org.

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Bridges Grade 3
Home Connections

Unit 1
Addition & Subtraction Patterns

Unit 2
Introduction to Multiplication

Unit 3
Multi-Digit Addition & Subtraction

Unit 4
Measurement & Fractions

Unit 5
Multiplication, Division & Area

Unit 6
Geometry

Unit 7
Extending Multiplication & Fractions

Unit 8
Bridge Design & Construction: Data Collection & Analysis

NAME | DATE

Addition Fact Review page 1 of 2

Note to Families

As a classroom teacher, I appreciate the ways in which families contribute to their children's success in school. When you take the time to review your child's schoolwork, talk about your child's day, and practice concepts and skills, you play an important role in your child's education.

In math class, we have been reviewing patterns in basic addition facts. We have reviewed helpful strategies and identified facts we already know. This assignment is intended to be a review and will give students an opportunity to share strategies with you that will later be used with larger numbers.

---

1 Complete these Doubles and Make Ten facts.

4	6	9	8	7	5	9
+ 4	+ 4	+ 9	+ 2	+ 7	+ 5	+ 1
8	**10**	**18**	**10**	**14**	**10**	**10**

2 Complete these Doubles Plus or Minus One facts.

5	7	3	4	8	9	6
+ 4	+ 8	+ 2	+ 3	+ 9	+ 10	+ 5
9	**15**	**5**	**7**	**17**	**19**	**11**

3 6 + 1 and 7 + 2 are examples of Count On facts. Write three more Count On facts.

Responses will vary but should be in the form n + 1, 1 + n, n + 2, 2 + n, n + 3, or 3 + n.

4 Kallie thinks that every Doubles problem will have an even sum. Do you agree or disagree? Explain why.

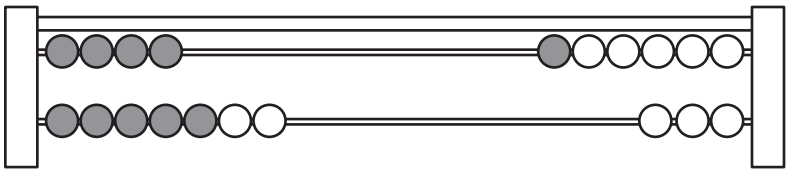
Responses will vary.
Doubles facts always have even sums.

5 The sum of two numbers is 12. List three possible equations.

Responses will vary.

a ____ + ____ = 12 **b** ____ + ____ = 12 **c** ____ + ____ = 12

6 Write an equation that could represent this picture.



Responses will vary. Examples:
4 + 7 = 11, 4 + 5 + 2 = 11, 8 + 3 = 11

(continued on next page)

NAME | DATE

Addition Fact Review page 2 of 2

7 Emma says that she can prove that 8 + 3 = 7 + 4. How could she use a number rack to prove her thinking? Draw a number rack or explain in writing.

Responses will vary.

8 **CHALLENGE** Solve the problem in the easiest way you can. Show your work. (Hint: Change the order in which you add the numbers.)
60 + 50 + 40 + 70 + 30 =

250
Work will vary.

9 **CHALLENGE** Sage wants to buy board games for some of her friends. Board games cost $9 each. She has $6 and one coupon for $3 off. Her Aunt Barbara gave her $7 and another coupon for $3 off.

a How many games can Sage buy if she uses the coupons? Show your work.

She can buy 2 games. Work will vary. Example:
$6 + $7 = $13 (total money)
$9 – $3 = $6 (cost per game)
$6 × $2 = $12 (cost for 2 games)

b Will Sage have any money left over? If so, how much? Show your work.

She will have $1 left over.
Work will vary.

NAME | DATE

Addition & Subtraction Review page 1 of 3

Note to Families

Students have reviewed and explored addition facts and strategies, and they are now investigating subtraction facts. Naming, categorizing, and identifying strategies will help your child not only understand and solve basic subtraction facts but also solve larger subtraction problems. These strategies help students develop a better understanding of the relationship between numbers and operations. Encourage your child to share with you the fact strategies we have used in the classroom. If your child is having trouble remembering the names of the strategies, the chart at the bottom of page 5 will help.

1 Complete these subtraction facts.

5 – 2 = 3 8 – 3 = 5 6 – 1 = 5 9 – 2 = 7

2 Complete these subtraction facts.

12 – 6 = 6 8 – 4 = 4 16 – 8 = 8 14 – 7 = 7

3 What do the facts in Problem 2 have in common?

Responses will vary. Examples:
- The difference is always equal to the subtrahend
- The minuend is always even.
- The minuend is always twice the subtrahend (and the difference)

4 Complete these subtraction facts.

9	11	12	13	12	11
– 4	– 4	– 7	– 8	– 4	– 5
5	7	5	5	8	6

5 Complete these subtraction facts.

19 – 9 = 10 12 – 2 = 10 17 – 7 = 10 14 – 4 = 10

6 What is the name for facts like those in Problem 5?

Back to Ten facts.

(continued on next page)

NAME | DATE

Addition & Subtraction Review page 2 of 3

7 There are 13 blue marbles and 7 red marbles in a bag. How many more blue marbles than red marbles are in the bag? Keona says this is a subtraction problem. Tamron says it is an addition problem. What do you think? Why?

Responses will vary. The problem can be solved with addition or subtraction. Since it involves the comparison of two quantities, students will most likely interpret it to be a subtraction problem.

8 Complete these addition facts.

9 + 4 = **13**	7 + 9 = **16**	10 + 8 = **18**	6 + 4 = **10**	4 + 7 = **11**	8 + 6 = **14**
8 + 3 = **11**	7 + 8 = **15**	6 + 6 = **12**	9 + 8 = **17**	4 + 7 = **11**	5 + 9 = **14**

9 Complete each equation with a different pair of numbers whose difference is 6.

Responses will vary.

a _____ – _____ = 6 **b** _____ – _____ = 6

(continued on next page)

NAME | DATE

Addition & Subtraction Review page 3 of 3

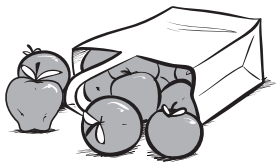
10 Lisa and her dad are peeling apples to make some apple pies. The pies need 14 apples. Lisa and her dad have peeled 5 apples.

a Is there an odd or even number of apples left to peel? How do you know?

An odd number.
Responses will vary.

b How many apples are left to peel? Show your work.

9 apples.
Work will vary.



11 **CHALLENGE** Lisa has 32 clean dishes to put away after emptying the dishwasher. After she put away 4 dishes, she helped her mother bring groceries in from the car. Then she put away 7 more dishes. How many dishes still need to be put away? Show your work.

21 dishes.
Work will vary.

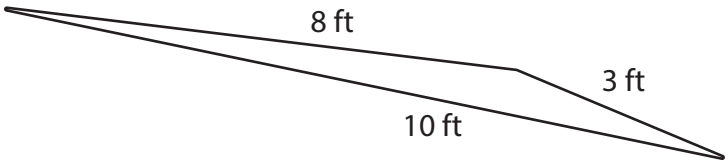
Subtraction Strategy	Example
Zero facts	5 – 0 = 5, 18 – 0 = 18
Count Back facts	9 – 1 = 8, 7 – 2 = 5, 14 – 3 = 11
Take All facts	6 – 6 = 0, 15 – 15 = 0
Take Half facts	8 – 4 = 4, 12 – 6 = 6
Back to Ten facts	14 – 4 = 10, 18 – 8 = 10
Take Away Ten facts	19 – 10 = 9, 16 – 10 = 6
Up to Ten facts	For 17 – 8, start at 8, add 2 to get to 10, add 7 to get to 17. 2 + 7 = 9. 17 – 8 = 9.

NAME | DATE

Of Mice & Moles page 1 of 2

For problems 1–3, show your work using numbers, words, or labeled sketches.

1 Xavier watched a mouse walk this path. How far did the mouse travel?



21 feet. Work will vary.

2 A mole was burrowing in a field. First, the mole went 6 meters in one direction, then 8 meters in another direction, and then 4 meters in another direction. How far did the mole burrow?

18 meters. Work will vary.

3 a Charlie T. Mole ate 16 insects. Anabel H. Mole ate 26 insects. How many more insects did Anabel eat?

Anabel ate 10 more insects.
Work will vary.

b Peter says this is a subtraction problem. Gladys says it is an addition problem. What do you think? Why?

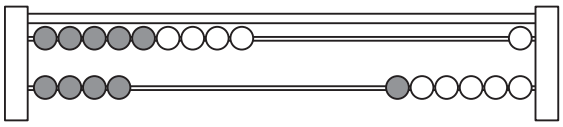
Responses will vary. Because it involves the comparison of two quantities, many students will interpret it to be a subtraction problem.

4 The difference of two numbers is 7. List three possible equations that have a difference of 7.

_____ – _____ = 7 _____ – _____ = 7 _____ – _____ = 7

Responses will vary.

5 Write an equation that could represent this picture.



Responses will vary.
Examples: 9 + 4 = 13,
5 + 4 + 4 = 13 8 + 5 = 13

(continued on next page)

NAME | DATE

Of Mice & Moles page 2 of 2

6 **CHALLENGE** Abel S. Mouse searched for food for 28 minutes. He found a snack and spent 10 minutes eating his snack. How much longer did it take Abel S. Mouse to find his snack than it took him to eat it? Which of the following represents this situation?

○ $28 + s = 10$ ○ $10 + 28 = s$ ○ $38 - s = 28$ ● $28 - 10 = s$

7 Jana practiced the piano 10 minutes longer than her brother, Grant. Jana practiced for 35 minutes. How long did Grant practice? Show your work.

Grant practiced 25 minutes.

8 **CHALLENGE** Lulu practiced the piano for 45 minutes, and then she practiced the violin for 30 minutes.

a How much time did Lulu spend practicing her instruments? Show your work.

75 minutes.

b Is that more or less than an hour? How do you know?

More than an hour.
Responses will vary.

c How many minutes more or less than an hour did Lulu practice? Show your work.

15 minutes more than an hour.
Work will vary.

NAME | DATE

Sums & Differences page 1 of 2

1 The sum of three numbers is 12. What could those three numbers be? Think of three different solutions.

12 = ____ + ____ + ____ 12 = ____ + ____ + ____ 12 = ____ + ____ + ____

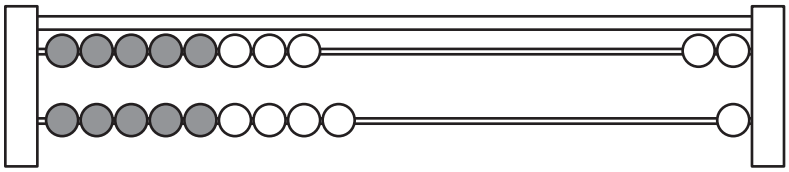
Responses will vary.

2 The difference between two numbers is 12. What could those numbers be?

12 = ____ – ____ 12 = ____ – ____ 12 = ____ – ____

Responses will vary.

3 Look at this picture and think about the many different equations you could write to represent it.



a Write an addition equation to represent the picture above.

Responses will vary.

b Write a subtraction equation to represent the picture above.

Responses will vary.

4 a Add each pair of numbers.

8	10	78	10	168	28	10
+ 10	+ 38	+ 10	+ 118	+ 10	+ 10	+ 58
18	**48**	**88**	**128**	**178**	**38**	**68**

b What pattern do you see in the combinations above?

Responses will vary. Examples:

- **You aways add 10 to another number.**
- **There is always an 8 in the ones place.**
- **Adding 10 doesn't change the number in the ones place.**
- **Adding 10 makes the number in the tens place increase by 1.**

(continued on next page)

NAME | DATE

Sums & Differences page 2 of 2

Use numbers, pictures, or words to show your work when you solve these problems. Use additional paper if you need more room.

5 Jack is 36 inches tall. Mary is 6 inches taller than Jack. Cameron is 4 inches taller than Mary.

a How many inches tall is Cameron?

46 inches

b How many inches tall is Mary?

42 inches

6 **CHALLENGE** You and your friend are talking about your solutions to problem 2. Your friend said that there are exactly 12 different pairs of numbers with a difference of 12 and that he had found them all. How would you respond to him?

He is incorrect. Responses will vary. Example:
There are infinitely more pairs of numbers with a difference of
12 (n + 12) – n = 12.

7 **CHALLENGE** You and your friend were thinking about pairs of whole numbers that have a *sum* of 12. How many pairs of whole numbers can you find that have a sum of 12? (Note: A whole number is equal to or greater than 0 and does not include a fraction. 2 is a whole number. 2 ½ is not a whole number.)

There are 7 pairs of whole numbers with a sum of 12.
0 + 12 = 12, 1 + 11 = 12, 2 + 10 = 12, 3 + 9 = 12,
4 + 8 = 12, 5 + 7 = 12, and 6 + 6 = 12.

8 **CHALLENGE** How many pairs of whole numbers have a sum of 40?

21 pairs; work will vary.

9 **CHALLENGE** How many pairs of whole numbers have a sum of 110?

56 pairs; work will vary.

10 **CHALLENGE** How many pairs of whole numbers have a sum of 99?

50 pairs; work will vary.

NAME | DATE

Adding Tens page 1 of 2

1 Count on by 10s to fill in the blanks below.

a	217	227	237	247	257	267	277	287	297
b	2	12	22	32	42	52	62	72	82
c	80	90	100	110	120	130	140	150	160
d	336	346	356	366	376	386	396	406	416

2 Solve each problem below. Show your work for each.

a The book measures 40 centimeters and the paper measures 120 centimeters. How long are they together if you line them up end-to-end?

160 cm; work will vary.

b The paper measures 120 centimeters and the pen measures 30 centimeters. How long are they together if you line them up end-to-end?

150 cm; work will vary.

c The photo measures 30 centimeters and the frame measures 250 centimeters. If you lined them up end-to-end, how long would they be together?

280 cm; work will vary.

(continued on next page)

NAME | DATE

Adding Tens page 2 of 2

3 Albert rode his bike for 14 minutes. Ally rode her bike for 8 minutes.

a How much longer did Albert ride?

6 minutes

b Which equation could you use to represent this problem:

○ $14 + 8 = b$ ○ $14 + b = 8$ ○ $8 - b = 14$ ● $14 - b = 8$

4 Show your thinking when you solve these problems:

a Bobby is supposed to be at school at 8:30 but on Monday he was 17 minutes late. What time did Bobby get to school?

8:47
Work will vary.

b **CHALLENGE** Steve was also late to school on Monday, but he got there 8 minutes before Bobby. What time did Steve get to school?

8:39
Work will vary.

NAME | DATE

More Adding Tens page 1 of 2

1 Count on by 10s to fill in the blanks below.

a	46	56	66	76	86	96	106	116
b	108	118	128	138	148	158	168	178
c	202	212	222	232	242	252	262	272
d	736	746	756	766	776	786	796	806

2 Solve the problems below. Show your work for each.

a The book measures 45 units and the paper measures 23 units. How long are they together if you line them up?

68 units; work will vary.

b The pencil measures 20 units and the pen measures 32 units. How long are they together if you line them up?

52 units; work will vary.

c The photo measures 95 units and the frame measures 25 units. If you lined them up, how long would they be together?

120 units; work will vary.

d You line up a paper, pencil, and pen and they measure 43 units end to end. The paper measures 23 units, the pencil measures 10 units. What does the pen measure?

10 units; work will vary.

(continued on next page)

NAME | DATE

More Adding Tens page 2 of 2

3 Alex's goal this month is to ride 20 miles on his bike. One week he rode 5 miles, the next week he rode 6 miles, and this past week he rode 8 miles.

a How many miles has Alex ridden so far? **19 miles**

b How many miles does Alex still need to ride to meet his goal of riding 20 miles this month?

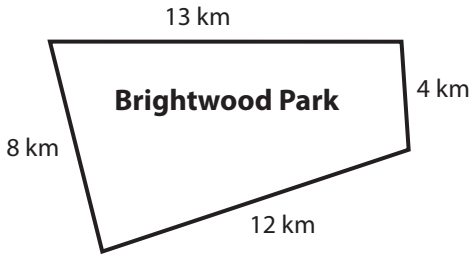
1 mile

4 Alex's sister Hazel also likes to bicycle a lot. In three weeks, she rode a total of 20 miles. How many miles did she ride each week? Find at least four solutions to the problem.

Responses will vary.

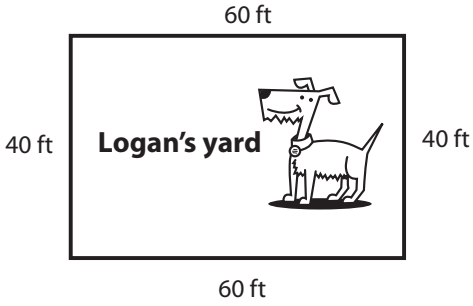
Week 1		Week 2		Week 3		Total
_____	+	_____	+	_____	=	20 miles
_____	+	_____	+	_____	=	20 miles
_____	+	_____	+	_____	=	20 miles
_____	+	_____	+	_____	=	20 miles

5 Steve and Henry rode their bikes completely around Brightwood Park. The distances are marked on the map. How many kilometers (km) did they ride? Show your work.



37 km
Work will vary.

6 Logan's dog, Chief, likes to patrol along the fence of Logan's backyard to make sure everything is as it should be. How many feet does Chief walk every time he patrols the yard? Show your work.



200 ft.
Work will vary.

NAME | DATE

Making Ten page 1 of 2

1 Complete each equation.

7 + 3 = 10 10 = 2 + 8 5 + 5 = 10 10 = 4 + 6

2 Complete each equation.

27 + 3 = 30 30 = 2 + 28 25 + 5 = 30 30 = 4 + 26

27 + 13 = 40 40 = 2 + 38 35 + 5 = 40 40 = 14 + 26

27 + 53 = 80 80 = 2 + 78 75 + 5 = 80 80 = 54 + 26

3 Show your thinking when you solve these problems.

a Fiona's team had 27 points and the other team had 40 points. The team with the most points wins the game. If the other team scored no more points, how many more points would Fiona's team need to win?

14 more points
Work will vary.

b Mark has $35. He needs $80 to buy the bike he really wants. How much more money does Mark need to buy the bike?

$45
Work will vary.

(continued on next page)

NAME | DATE

Making Ten page 2 of 2

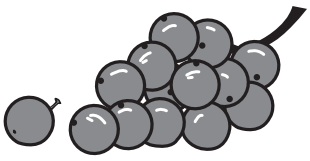
4 Show your thinking when you solve these problems.

a Terilyn and Mark are on a fishing trip. Terilyn caught 13 fish. She has to catch 10 more to have as many fish as Mark. How many fish has Mark caught?

23 fish
Work will vary.

b Terilyn has some grapes in her lunch. She gave 20 grapes to Mark, and now she has 28 grapes left. How many grapes did Terilyn have to start with?

48 grapes
Work will vary.



NAME | DATE

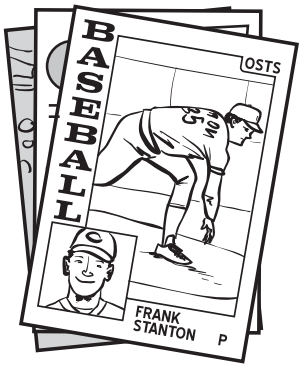
Double-Digit Addition page 1 of 2

1 Add each pair of numbers. Show all your work. Try to use different methods to add the numbers.

a 20 + 20 = **40**	**b** 40 + 30 = **70**	**c** 30 + 60 = **90**
d 50 + 80 = **130**	**e** 70 + 80 = **150** **Work will vary.**	**f** 90 + 20 = **110**

2 Victor had 120 baseball cards. His cousin gave him 40 more cards. Then his brother gave him 50 more cards. How many baseball cards does Victor have now? Show all your work.

210 baseball cards.
Work will vary.



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NAME | DATE

Double-Digit Addition page 2 of 2

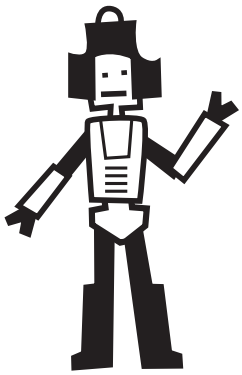
Show all your work when you solve these problems.

3 The toy store is having a special on board games. If you buy two games for $17 each, you get $5 off the total. How much would you end up paying for those two games?

$29
Work will vary.

4 Action figures that usually cost $12 are on sale. During the sale you can get two action figures for $15. How much do you save when you buy two for $15?

$9
Work will vary.



5 **CHALLENGE** Jaime has 38 marbles. If Jorge had 14 more marbles, he would have twice as many marbles as Jaime. How many marbles does Jorge have now?

62 marbles
Work will vary. Example:
38 + 38 = 76
76 – 14 = 62

NAME | DATE

Patterns & Sums page 1 of 2

1 Add each pair of numbers. Show all your work.

a 30 + 65 = **95**	**b** 42 + 35 = **77**	**c** 46 + 38 = **84**
d 53 + 82 = **135**	**e** 67 + 85 = **152** **Work will vary.**	**f** 94 + 76 = **170**

2 Victor had 126 Lego pieces. His cousin gave him 20 more Lego pieces. Then his brother gave him 58 more. How many Lego pieces does Victor have now? Show all your work.

204 lego pieces.
Work will vary.

(continued on next page)

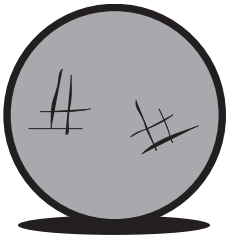
NAME | DATE

Patterns & Sums page 2 of 2

Show your work when solving these story problems.

3 Some of the third graders and fourth graders started a new kickball game at recess. The third graders scored 8 runs in the first inning and 4 runs in the second inning. The fourth graders scored 5 runs in the first inning and 16 runs in the second. How many more runs do the fourth graders have?

9 more runs.
Work will vary.



4 **CHALLENGE** Barbara has three chickens. Last week they each laid 4 eggs, and this week they each laid 5 eggs. Barbara gave 8 eggs away and used 7 of the eggs for making breakfasts and cookies. How many eggs does she have left?

12 eggs left.
Work will vary

NAME | DATE

The Pet Store page 1 of 2

Note to Family

At school, we have started looking for efficient ways to find the total number of items in a group. We studied a picture of a pet store that was full of packages and containers. We worked to figure out how many items were in each package and then how many were in all the packages together. Sometimes, the arrangement of items was helpful—for example, a package of cat food had 2 rows of cans with 5 cans in each one. This made it easier to count by 2s or 5s to find the total. Watch how your child makes use of each of the arrangements in this assignment to help find the total.

Use the pictures to find the total for each problem below. Show your thinking with numbers, sketches, or words.

ex How many cans of dog food are there? How do you know?

1 How many cans of cat food are there? How do you know?

14 cans

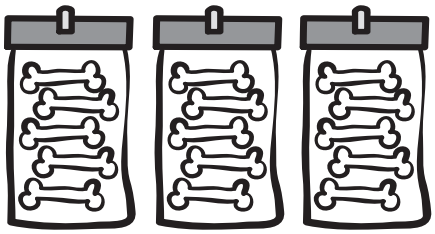
Explanations will vary.

2 How many balls are there in all? How do you know?

12 balls

Explanations will vary.

3 How many chew toys are there? How do you know?



15 chew toys

Explanations will vary.

(continued on next page)

NAME | DATE

The Pet Store page 2 of 2

4 Fill in the blanks.

17 – 8 = 9 6 + 7 = 13 13 – 9 = 4

3 + 7 = 10 16 – 8 = 8 5 + 10 = 15

4 + 4 + 4 + 4 = 16 8 + 8 + 8 = 24 6 + 6 + 6 = 18

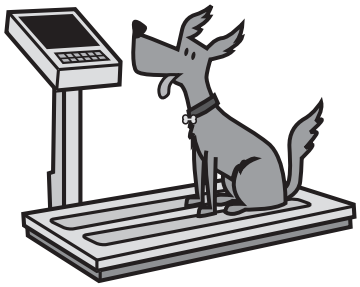
5 **CHALLENGE** Molly's kitten weighed 3 pounds when she got her. Now the kitten has gained 4 pounds, and Molly's dog weighs 4 times as much as her kitten.

a How many pounds does the kitten weigh now?
Write equations to show your thinking.

The kitten weighs 7 pounds.
Work will vary. Example:
3 + 4 = 7 pounds

b How many pounds does the dog weigh? Write equations to show your thinking.

The dog weighs 28 pounds.
Work will vary. Example:
7 × 4 = 28 pounds

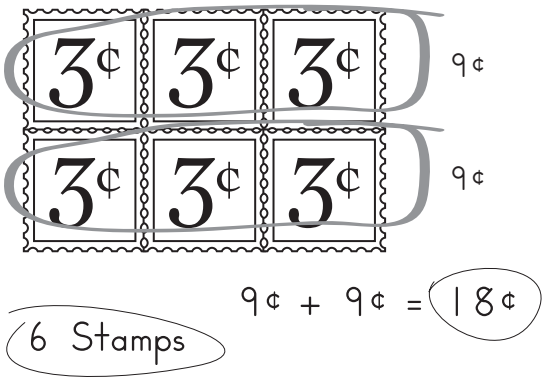


NAME | DATE

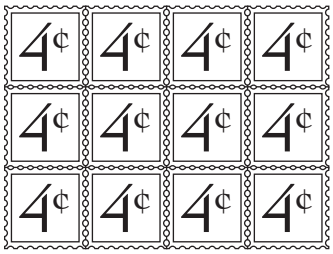
Stamp Challenges page 1 of 2

Use the images to find the total for each problem below. Show your thinking with numbers, sketches, or words.

ex How many stamps do you see? What is the total cost of the stamps?

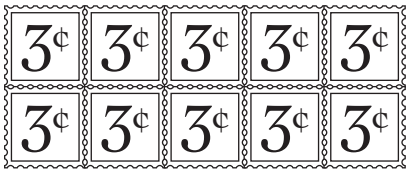


1 How many stamps do you see? What is the total cost of the stamps?



12 stamps
48¢
Work will vary.

2 How many stamps do you see? What is the total cost of the stamps?



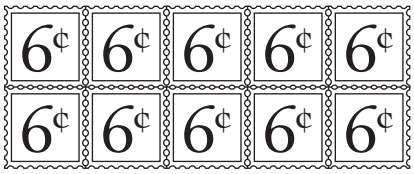
10 stamps
30¢
Work will vary.

(continued on next page)

NAME | DATE

Stamp Challenges page 2 of 2

3 How many stamps do you see? What is the total cost of the stamps?



10 stamps
60¢
Work will vary.

4 Explain your thinking with sketches, words, and equations.

a Stevie has 4 cards with 8 stamps on each card. Cindy has 8 cards with 4 stamps on each card. Who has more stamps, Stevie or Cindy?

They have the same number of stamps.
They each have 32 stamps.
Work may vary.

b **CHALLENGE** Liz bought sixteen 3¢ stamps and used them to mail two letters to her grandparents. If each letter used the same number of stamps, how much did it cost to mail each letter?

24¢
Work may vary.

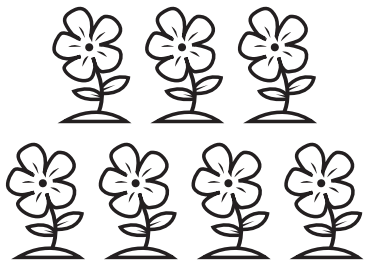
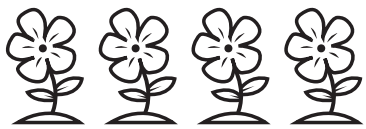
c **CHALLENGE** Create a new set of stamps. Decide how many stamps you want in the array and how much each stamp costs. (They should all cost the same amount.) Then find the total cost of the stamps.

Responses will vary.

NAME | DATE

Leaves & Flower Petals page 1 of 2

Answer each question below. Write an addition or multiplication equation to show how you figured it out.

Answer the question.	Write an equation.
ex  There are 3 flowers. How many *leaves?* 6	2 + 2 + 2 = 6 or 3 × 2 = 6
1  There are 3 flowers. How many *petals?* 15	5 + 5 + 5 = 15 or 3 × 5 = 15
2  There are 7 flowers. How many *leaves?* 14	2 + 2 + 2 + 2 + 2 + 2 + 2= 14 or 7 × 2 = 14
3  There are 4 flowers. How many *petals?* 20	5 + 5 + 5 + 5 = 20 or 4 × 5 = 20

Equations will vary. Examples above.

(continued on next page)

NAME | DATE

Leaves & Flower Petals page 2 of 2

Complete the following problems. Show your work using numbers, sketches, or words.

4 Mrs. Foley picked 27 flowers from her garden so her 3 children could each give a bouquet to their teachers. If each bouquet had the same number of flowers, how many flowers did each teacher get?

Each teacher got 9 flowers.
Work will vary.

5 Which equation describes the situation in problem 4 above?

○ $27 + 3 = n$ ● $3 \times n = 27$ ○ $n + 3 = 27$ ○ $27 \times 3 = n$

6 **CHALLENGE** Terry had 14 tulips and twice as many daffodils. How many flowers did Terry have in all?

Terry has 42 flowers.
Work will vary.

NAME | DATE

Skip-Counting & More page 1 of 2

1 Skip-count forward from each number. A few of the numbers have been filled in for you.

3	6	9	**12**	**15**	**18**	**21**	**24**	**27**
4	8	**12**	**16**	**20**	**24**	28	**32**	**36**
5	**10**	**15**	**20**	**25**	30	**35**	**40**	45

2 a Solve the following problems.

$2 \times 10 =$ **20** $4 \times 10 =$ **40** $8 \times 10 =$ **80**

b What do you notice about these problems?

Responses will vary. Examples:
- **You multiply by 10 each time.**
- **In the product, the digit in the tens place is the same as the number you multiplied by 10.**

3 a Solve the following problems.

$4 \times 6 =$ **24** $3 \times 8 =$ **24** $2 \times 12 =$ **24**

b What do you notice about these problems?

Responses will vary. Examples:
- **The product is always 24.**
- **If you halve one number ($4 \div 2 = 2$) and double the other ($6 \times 2 = 12$), the product is the same ($4 \times 6 = 2 \times 12 = 24$).**

(continued on next page)

NAME | DATE

Skip Counting & More page 2 of 2

4 Solve the following problems. Show your thinking using equations, sketches, or words.

a The greater roadrunner bird can run 14 miles per hour. That's 7 times faster than an ostrich can walk. How fast does an ostrich walk?

2 miles per hour.
Work will vary.

b **CHALLENGE** The body of a greater roadrunner is 16 inches long. Its tail is another 8 inches. The total length of a greater roadrunner is 4 times longer than a lovebird. How many inches long is the lovebird?

6 inches
Work will vary.

NAME | DATE

Story Problems & Number Line Puzzles page 1 of 2

Story Problems

1 Solve each problem. Use pictures, numbers, or words to show your thinking. Then write an equation for the problem.

a Roza is 4 years old. Her sister Elsa is twice as old as Roza. How old is Elsa?

8 years old
Work will vary.

Equation: **4 × 2 = 8**

b Theo's baby brother, Thomas, is 24 inches tall. Theo is twice as tall as Thomas. How tall is Theo?

48 inches (4 feet)
Work will vary.

Equation: **24 × 2 = 48**

c Savannah has read 4 pages in her new book. Carlos has read 4 times as many pages as Savannah. How many pages has Carlos read?

16 pages
Work will vary.

Equation: **4 × 4 = 16**

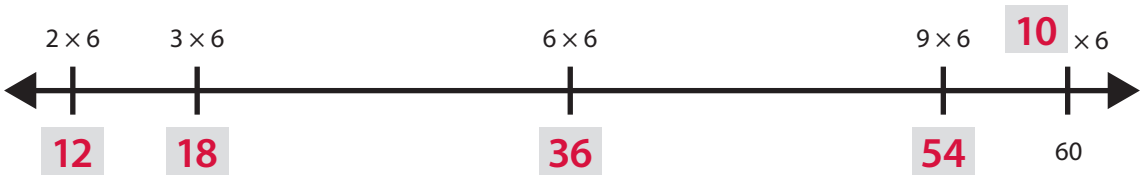
(continued on next page)

NAME | DATE

Story Problems & Number Line Puzzles page 2 of 2

Number Line Puzzles

2 Here is a number line puzzle. Use what you know about multiplication to fill in the blanks.



3 Use pictures, numbers, and words to solve the problem. Then select the equations that represent the problem.

a Tim saw some monkeys sitting in trees at the zoo. There were 6 monkeys sitting in each tree. There were 24 monkeys in all. How many trees were there?

4 trees
Work will vary.

b Which two equations describe the situation in problem 3a?

- ○ $24 + 6 = n$
- ● $6 \times n = 24$
- ○ $24 - 6 = n$
- ● $24 \div 6 = n$

4 **CHALLENGE** The Turner family went bike camping at a state park near their city. It took them 4 hours of riding to get there from their house. For the first 2 hours they rode 12 miles per hour. For the last 2 hours they rode 9 miles per hour. How far is the state park campground from their house?

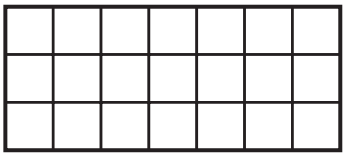
42 miles.
Work will vary.

NAME | DATE

More Windows page 1 of 2

1 Figure out how many windowpanes are in each window. Show your thinking with words, numbers, and pictures. Write an equation for each problem.

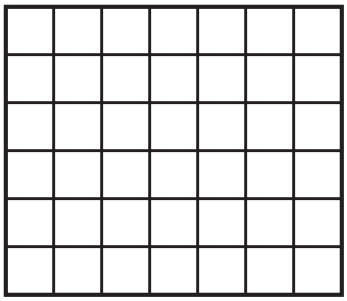
a



Work will vary.

Equation 3 × 7 = 21 panes

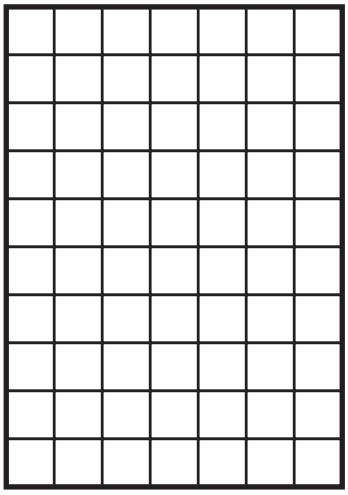
b



Work will vary.

Equation 6 × 7 = 42 panes

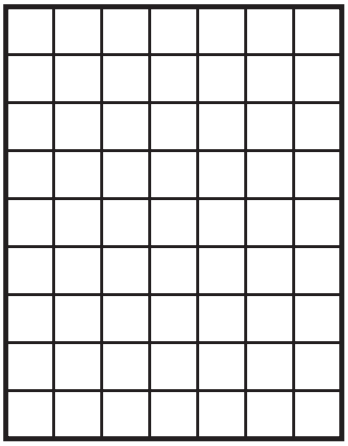
c



Work will vary.

Equation 10 × 7 = 70 panes

d



Work will vary.

Equation 9 × 7 = 63 panes

2 Solve each equation below.

6 × 4 = 24

8 × 3 = 24

6 × 4 = 24

10 × 4 = 40

5 × 8 = 40

8 × 5 = 40

3 × 9 = 27

9 × 3 = 27

9 × 3 = 27

(continued on next page)

NAME | DATE

More Windows page 2 of 2

3 Fill in the blanks in the skip-counts below.

a

4	8	12	16	20	24	28	32	36	40

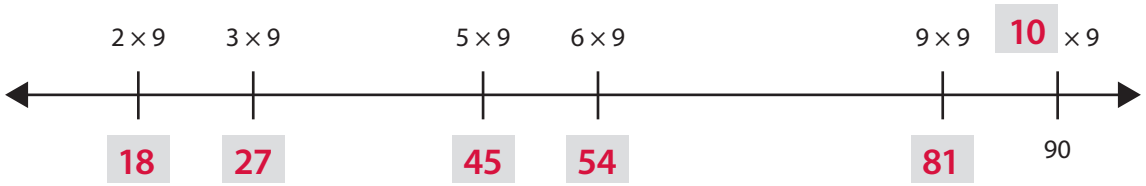
b

6	12	18	24	30	36	42	48	54	60

4 Complete the problems below.

$2 \times 3 =$ 6 $4 \times 3 =$ 12 $8 \times 3 =$ 24 $10 \times 3 =$ 30 $9 \times 3 =$ 27

5 Complete the Number Line Puzzle below.



6 Solve each problem. Show your thinking with equations, sketches, or words.

a Carl can wash 8 windows in an hour. How many windows can he wash in 3 hours?

24 windows
Work will vary.

b **CHALLENGE** Sarah can wash 7 windows in an hour. Lilja can wash 4 windows in an hour. How many windows can Sarah and Lilja wash in 4 hours if they work together?

44 windows
Work will vary.

NAME | DATE

Mixed Practice page 1 of 2

Number Puzzles

1 Find the missing numbers in the equations below.

5 × 4 = 20	8 × 3 = 24	9 × 3 = 27
4 + 10 = 14	18 – 9 = 9	15 – 7 = 8
4 × 7 = 28	8 × 4 = 32	6 × 6 = 36
16 – 7 = 9	5 + 8 = 13	9 + 3 = 12
8 × 2 = 16	7 × 5 = 35	4 × 3 = 12

2 Are the following true or false? Why?

Explanations will vary.

a 9 + 5 = 10 + 4 (True) False Explain: 14 = 14

b 9 – 5 = 10 – 4 True (False) Explain: 4 ≠ 6

c 9 × 5 = 10 × 4 True (False) Explain: 45 ≠ 40

Solve each problem. Show your thinking with equations, sketches, or words.

3 Suzie studies multiplication fact cards at home every Monday through Friday for 7 minutes on each of those days. How many minutes does she study the multiplication facts in a week?

35 minutes
Work will vary.

4 Jim paid $48 to buy a package of 6 flea treatments for his dog. How much does one flea treatment cost?

$ 8
Work will vary.

(continued on next page)

NAME | DATE

Mixed Practice page 2 of 2

5 **CHALLENGE** Each flea treatment usually lasts for about 4 weeks, but one year the fleas were especially bad. Jim's dog needed to be treated for fleas every 3 weeks until the weather cooled off.

a How many weeks of flea treatments would Jim's dog get from one package if each treatment only lasted 3 weeks?

18 weeks
Work will vary.

b In a normal year, when a flea treatment lasts 4 weeks, how many more weeks of treatments would Jim's dog get from one package?

6 more weeks
Work will vary.

6 **CHALLENGE** Bobby's favorite cupcakes come in packages of 4. He asked his grandma to buy them for a class party. She had to go to two grocery stores to get enough cupcakes for all the kids in the class. She bought 5 packages at the first store and 2 packages at the second store. How many cupcakes did Bobby's grandmother buy in all?

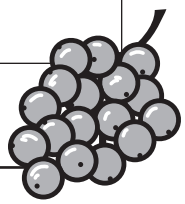
28 cupcakes
Work will vary.

NAME | DATE

Grocery Shopping page 1 of 2

1 Fill in the tables below.

Grapes $3.00 per pound	
Number of Pounds	Cost
1	$3.00
2	**$6.00**
4	**$12.00**
5	$15.00
10	**$30.00**
20	**$60.00**



Potatoes $1.25 per pound	
Number of Pounds	Cost
1	$1.25
2	**$2.50**
4	**$5.00**
5	$6.25
10	**$12.50**
12	**$15.00**

Missing Numbers

2 Find the missing numbers in the equations below.

$3 \times$ **4** $= 12$

6 $\times 3 = 18$

$7 \times 3 =$ **21**

$5 \times$ **5** $= 25$

$7 \times 4 =$ **28**

5 $\times 6 = 30$

$6 \times 4 =$ **24**

$6 \times$ **6** $= 36$

6 $\times 2 = 12$

(continued on next page)

NAME | DATE

Grocery Shopping page 2 of 2

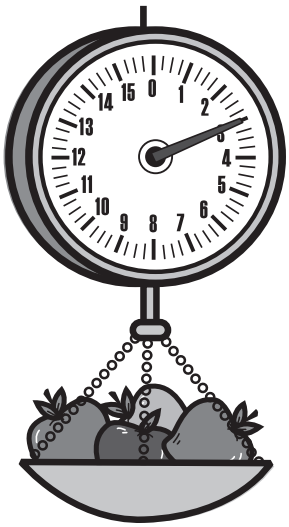
3 Solve each problem. Show your thinking with equations, sketches, or words.

a A 10-pack of instant oatmeal costs $2.00. How much does each pack cost?

$0.20 (20¢)
Work will vary.

b **CHALLENGE** Oranges are 2 pounds for $1.00. Apples are $2.00 per pound. Chris bought 5 pounds of oranges and 3 pounds of apples. How much did Chris pay for all the fruit?

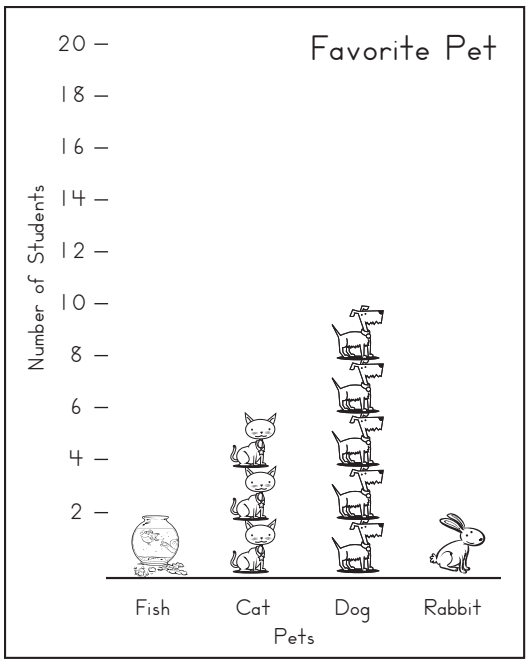
$8.50
Work will vary.

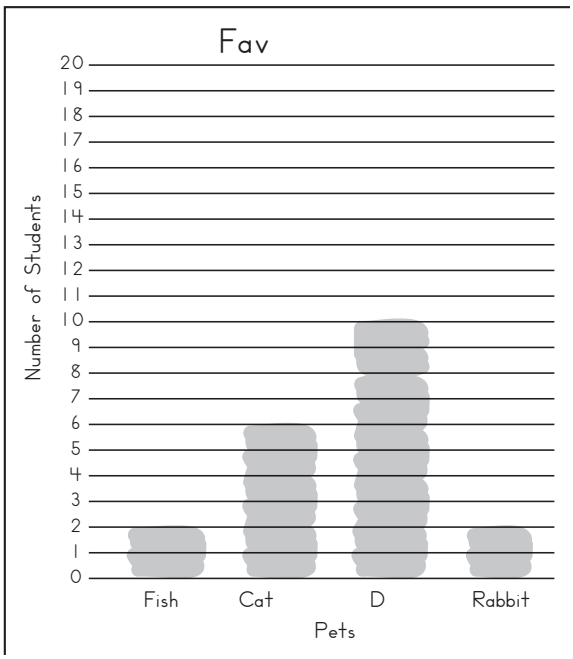


NAME | DATE

Favorite Pets page 1 of 2

1 Look at the two graphs below and then answer the following questions.





a Do the picture graph and the bar graph above represent the same data?

Yes

b Why or why not?

Explanations will vary. Example: *Each graph shows the same number of students for each pet.*

c Using the picture graph, tell how many students are in the class. Explain how you know.

20 students.
Explanations will vary.

d Using the bar graph, tell how many students are in the class. Explain how you know.

20 students.
Explanations will vary.

2 **CHALLENGE** Mr. Neon's class took a survey to find out everyone's favorite fruit. The number of votes for each fruit is listed below. On a separate sheet of paper, draw a picture graph that shows the information. Be sure your graph has a title and labels.

Bananas: 3 Apples: 7 Grapes: 6 Watermelon: 4 Strawberries: 4

Work will vary.

(continued on next page)

NAME | DATE

Favorite Pets page 2 of 2

Review

3 Conrad says that 8 × 7 is the same as 8 × 5 plus 8 × 2. Do you agree or disagree? Explain your thinking.

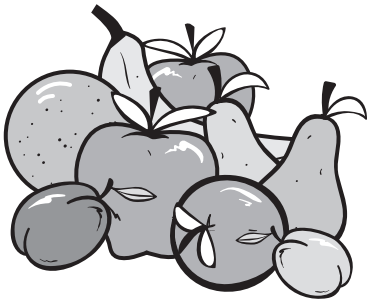
Conrad is correct.
Explanations will vary.

4 Alexis says that 6 × 9 is the same as 6 × 9 plus 6 × 9. Do you agree or disagree? Explain your thinking.

Alexis is incorrect.
Explanations will vary.

5 **CHALLENGE** Melea needs to provide 200 pieces of fruit for the local elementary school. Melea has 15 baskets. Each basket has 9 pieces of fruit in it. Does Melea have enough fruit? Show your thinking with numbers, pictures, or words.

Melea does not have enough fruit, because
9 × 15 = 135 and 135< 200.
Work will vary.



NAME | DATE

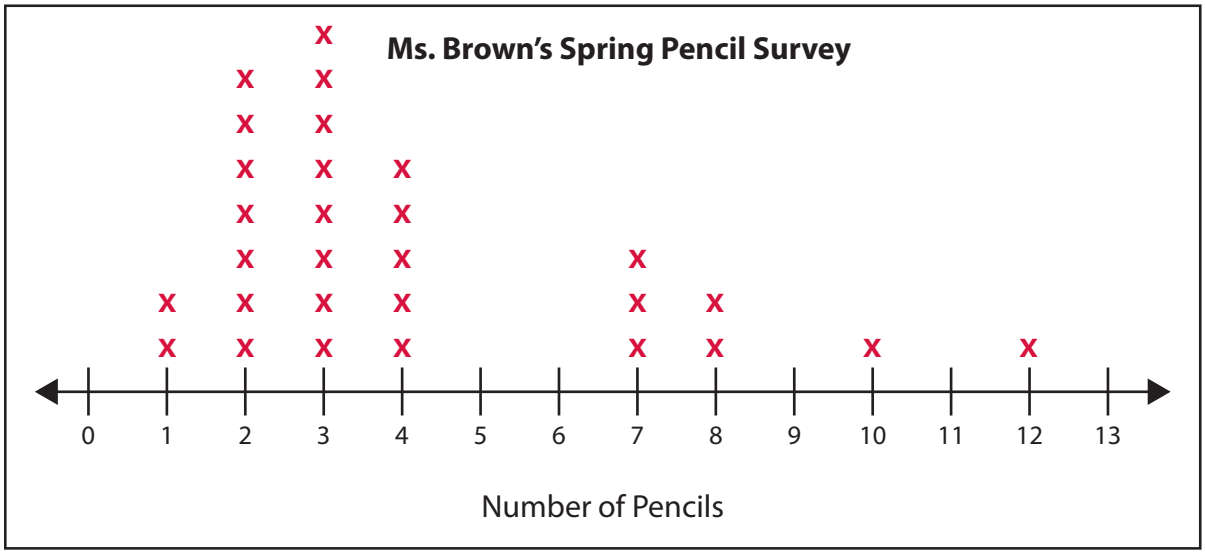
The Pencil Survey page 1 of 2

One day last spring, Ms. Brown asked her third graders to clean out their desks. She couldn't believe how many pencils most of the kids pulled out. "So that's where all the pencils have been!" she thought.

Ms. Brown decided to take a survey to find out how many pencils had been hiding in the kids' desks. The table below shows the survey results.

Number of Pencils	Number of Students
1	2
2	7
3	8
4	5
7	3
8	2
10	1
12	1

1 a Record the data on the line plot below.



b What was the most common number of pencils for a student to have in their desk in the spring?

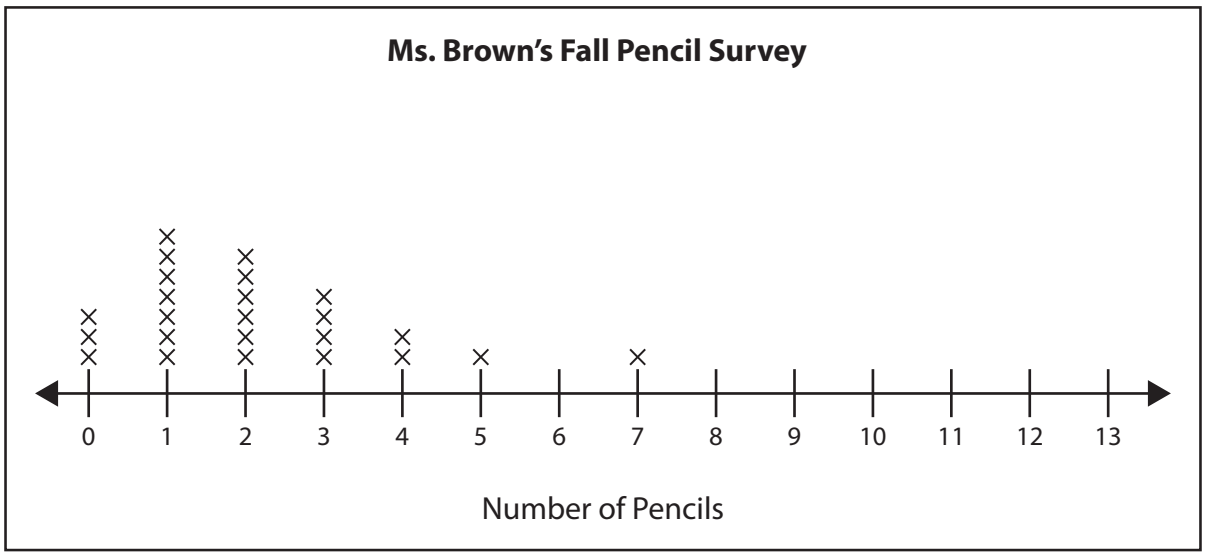
3 pencils

(continued on next page)

NAME | DATE

The Pencil Survey page 2 of 2

2 a The next year, Ms. Brown thought, "I will ask the students to clean out their desks earlier this year so we don't run out of pencils so fast." The line plot below shows how many pencils the kids found in their desks that time.



b What was the most common number of pencils for a student to have in their desk in the fall?

1 pencil

3 Were there more pencils hiding in the students' desks last spring (see problem 1) or in the fall (see problem 2)? Explain how you figured it out.

There were more pencils in the spring.
Explanations will vary.

4 **CHALLENGE** Exactly how many pencils were hiding in students' desks when Ms. Brown did the fall survey? (Hint: Be careful! The answer is not 24 pencils.)

51 pencils

NAME | DATE

Multiplying & Dividing page 1 of 2

1 Complete the multiplication facts.

5 × 6 = 30	2 × 7 = 14	1 × 2 = 2	5 × 7 = 35	3 × 5 = 15	8 × 5 = 40	5 × 9 = 45
4 × 2 = 8	5 × 2 = 10	9 × 2 = 18	2 × 5 = 10	10 × 3 = 30	10 × 5 = 50	4 × 6 = 24
10 × 0 = 0	1 × 8 = 8	2 × 3 = 6	7 × 4 = 28	6 × 6 = 36	10 × 8 = 80	3 × 9 = 27

2 Complete the division facts.

100 ÷ 10 = 10 16 ÷ 2 = 8 25 ÷ 5 = 5

12 ÷ 2 = 6 3 ÷ 1 = 3 20 ÷ 2 = 10

3 **CHALLENGE** Use what you know about basic fact strategies to solve these multiplication problems.

24 × 5 = 120	42 × 5 = 210	329 × 0 = 0	13 × 10 = 130	1,946 × 1 = 1,946	500 × 2 = 1,000	25 × 6 = 150

4 **a** Would the product of 3,407 × 10 be odd or even? even

b How do you know?

Explanations will vary. Examples:

- **The product of any odd number and any even number is always even.**
- **The product is 34,070. All whole numbers with a zero in the ones place are even.**

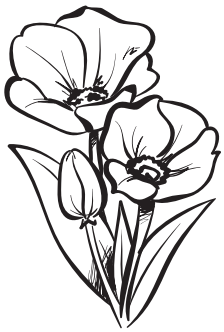
(continued on next page)

NAME | DATE

Multiplying & Dividing page 2 of 2

5 Will is helping his mom get ready for a party. His mom wants Will to put flowers in jars to put on the tables. He needs to put 7 flowers in each jar. He has 45 flowers.

a How many jars can he fill? Show all your work.



6 jars
Work will vary.

b How many flowers did Will have left over?

Will has 3 flowers left over.

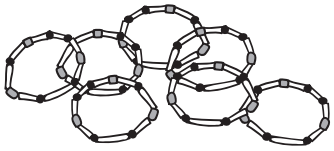
6 Mai is buying gifts for her 4 friends. She wants to get each friend a bracelet that costs $4 and a mechanical pencil that costs $3.

a How much money will she spend in all? Show all your work.

$28
Work will vary.

b Write an equation to represent this problem. Use the letter *m* to stand for the amount of money Mai spent in all.

Equations will vary.
Example: (4 + 3) × 4 = m



7 **CHALLENGE** Mai changed her mind and decided to get each of her 4 friends a comic book that cost $3.99 and an eraser that cost 99¢. How much money did she spend in all? Show all of your work.

$19.92
Work will vary.

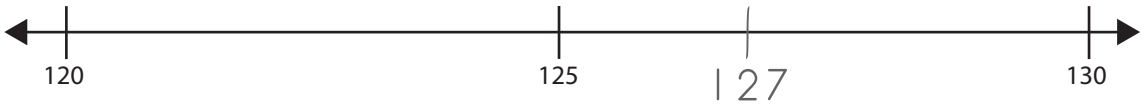
NAME | DATE

Rounding to the Nearest Ten page 1 of 2

You can use a number line to help round to the nearest ten. If a number is closer to the next larger multiple of 10, round up. If it is closer to the next smaller multiple of 10, round down.

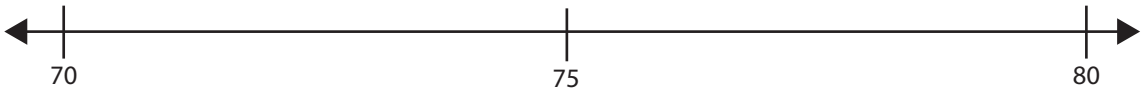
If the digit in the ones place is 5 or higher, round up. If the digit in the ones place is less than 5, round down.

ex Round 127 to the nearest ten. Use the number line to help.



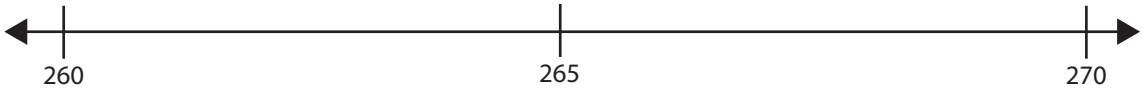
127 130

1 Round each number to the nearest ten. Use the number line to help.



a 78 80 **b** 75 80 **c** 74 70

2 Round each number to the nearest ten. Use the number line to help.



a 267 270 **b** 262 260 **c** 265 270

3 Round each number to the nearest ten. (Look at the digit in the ones place. Think about a number line if it helps you.)

a 43 40 **b** 85 90 **c** 18 20

d 282 280 **e** 617 620 **f** 539 540

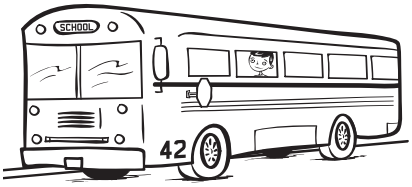
(continued on next page)

NAME | DATE

Rounding to the Nearest Ten page 2 of 2

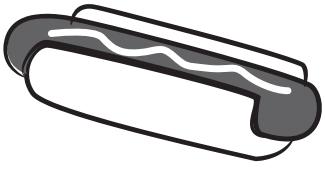
4 The third and fourth graders at Fernwood School are going on a field trip. They will fill 3 school buses. Each bus holds 52 passengers. How many people will be going on the field trip? Show your work.

156 people
Work will vary.



5 **CHALLENGE** Mr. Kelly bought 8 dozen hot dogs for the third grade picnic. His pet dog broke into the groceries and ate 14 hot dogs. If each picnic guest eats one hot dog, how many people can still have a hot dog? Show your work.

82 people
Work will vary.



NAME | DATE

Round & Round page 1 of 2

1 Rounding numbers can help you make good estimates. Round each pair of numbers to the nearest ten and then add the rounded numbers to estimate the sum.

Numbers to Add	Rounded to the Nearest Ten	Estimated Sum
ex 237 + 349	240 + 350	240 + 350 590
The sum of 237 and 349 is about equal to 590.		

Numbers to Add	Rounded to the Nearest Ten	Estimated Sum
a 168 + 122	170 + 120	170 +120 290
The sum of 168 and 122 is about equal to 290.		

Numbers to Add	Rounded to the Nearest Ten	Estimated Sum
b 147 + 618	150 + 620	150 +620 770
The sum of 147 and 618 is about equal to 770.		

2 Estimate for each story problem below. Explain your estimation using numbers, sketches, or words.

a Ravi likes to ride on the merry-go-round. Each ride lasts for 49 seconds. If Ravi takes 2 rides, about how long does he spend on the merry-go-round?

About 100 seconds
Work will vary.

b Each ride on the merry-go-round costs 97 cents. If Ravi rides the merry-go-round 4 times, about how much does he have to pay?

About $4
Work will vary.

(continued on next page)

NAME | DATE

Round & Round page 2 of 2

Show all your work when you solve these story problems.

3 Midge is a tiger shark and Bruce is a great white shark. Midge is 396 centimeters long and Bruce is 609 centimeters long. How many centimeters longer is Bruce than Midge?

213 cm
Work will vary.

4 Which equation does NOT describe the situation in problem 3?

- ○ 609 – 396 = c
- ● 396 + 609 = c
- ○ 396 + c = 609
- ○ 609 – c = 396

5 **CHALLENGE** The greater roadrunner (a bird that runs better than it flies) can run 16 miles per hour. A frightened ostrich can run 3 times faster.

a How fast can a frightened ostrich run?

48 miles per hour
Student work wil vary.

b How far can a frightened ostrich run in half an hour?

24 miles
Work will vary.

c Fill in the boxes to complete an equation to represent problem 5b.

$16 \times \boxed{3} \div \boxed{2} = m$

NAME | DATE

Rounding to Tens & Hundreds page 1 of 2

Note to Families

This worksheet gives students practice rounding to the nearest ten and hundred. Round numbers to the nearest ten by checking the digit in the ones place. If that digit is 5 or greater, round up to the next ten. If the digit is 4 or less, the digit in the tens place stays the same. When you round to the nearest hundred, check the digit in the tens place. If that digit is 5 or greater, round up to the next hundred. If that digit is 4 or less, the digit in the hundreds place stays the same.

1 Round the following numbers to the nearest 10.

32 **30**	378 **380**	87 **90**
1,055 **1,060**	63 **60**	

2 Round the following numbers to the nearest 100.

213 **200**	347 **300**	59 **100**
408 **400**	2,665 **2,700**	

3 Round the following:

	to the nearest 10	to the nearest 100
26	**30**	**0**
493	**490**	**500**
1,845	**1,850**	**1,800**
802	**800**	**800**
199	**200**	**200**

(continued on next page)

NAME | DATE

Rounding to Tens & Hundreds page 2 of 2

Show all your work for these problems.

4 Andy's class wants to help poor families in Guatemala grow their own food. A $35 donation to a relief organization will provide a family with the seeds and tools they need to build a vegetable garden.

a Mark the most reasonable estimate for how much it would cost to help 4 families build vegetable gardens:

○ $75.00 ○ $100.00 ● $150.00 ○ $200.00

b What is the exact cost of seeds and tools for 4 family gardens through the relief organization?

$140
Work will vary.

c If Andy's class raises $167, how much money will be left over?

$27
Work will vary.

5 **CHALLENGE** A donation of $75 to the relief organization can bring a health counselor to a poor neighborhood in Indonesia to help mothers improve their children's health. Ms. Murray and Mr. Austin both have 30 students in their classes. If each child gives $5, how many neighborhoods can they provide health counselors for?

4 neighborhoods
Work will vary.

NAME | DATE

Two-Digit Addition, Card Collecting & Shopping page 1 of 2

1 Add each pair of numbers. Show all your work.

a 30 + 65 = **95**	**b** 42 + 35 = **77** **Work will vary.**	**c** 46 + 38 = **84**
d 53 + 82 **135**	**e** 67 + 85 **152** **Work will vary.**	**f** 94 + 76 **170**

2 Henry had 126 baseball cards. His cousin gave him 20 more cards. Then Henry gave his brother 58 cards. How many baseball cards does Henry have now? Show all your work.

88 cards
Work will vary.

(continued on next page)

NAME | DATE

Two-Digit Addition, Card Collecting & Shopping page 2 of 2

Show your work when you solve these problems.

3 DVD players are on sale for $84. That's $35 off the regular price. What is the regular price?

$119
Work will vary.

4 **CHALLENGE** MP3 players cost $85 each. Mark has a coupon that will take $15 off the total if he buys two. If he uses his coupon, how much will Mark pay for two MP3 players?

$155
Work will vary.

NAME | DATE

Construction Paper, Scooters & Snails page 1 of 2

1 Solve the subtraction problems. Show all your work.

a 67 – 28 = **39**	**b** 83 – 37 = **46**
Work will vary.	
c 92 – 54 = **38**	**d** 500 – 199 = **301**
Work will vary.	

2 Mr. Jones needs 126 pieces of construction paper to do an art project with his students. He has a full pack with 50 sheets of paper and an open pack with some more sheets. How many more sheets of paper does he need to borrow from the teacher next door?

a Choose the information that will help you solve the problem.

- ○ There are 24 students in the class.
- ● The open pack has 17 sheets of paper.
- ○ Packs of construction paper cost $3 each.
- ○ He has 32 pencils.

b Solve the problem. Show all your work. Write your answer on the line at the bottom of the page.

Work will vary.

Mr. Jones needs to borrow ___59___ more sheets of paper.

(continued on next page)

NAME | DATE

Construction Paper, Scooters & Snails page 2 of 2

3 Angela wants to buy a scooter. She has saved $57 from birthday money and $19 more by doing gardening jobs for neighbors. The scooter costs $125. How much more money does Angela need?

a Estimate the amount of money Angela still needs, and explain your thinking. How did you get your estimate?

Student responses will vary.

b Which equation does *not* represent this problem? (The letter *m* stands for money.)

- ○ $57 + $19 + *m* = $125
- ○ $125 – $57 – $19 = *m*
- ● $125 + $57 + $19 = *m*
- ○ $125 – *m* = $57 + $19

c Figure out how much more money Angela actually needs to buy the scooter. Show your work.

$ 49
Work will vary.

4 **CHALLENGE** Lucy, a garden snail, laid 4 batches of eggs one summer. Each batch had 53 eggs, but 17 eggs from each batch didn't survive. How many of Lucy's eggs hatched into baby snails?

a Write an equation to represent this problem. Use the letter *s* to stand for baby snails.

(53 – 17) × 4 = *s*

b Solve the problem. Show all of your work.

144 eggs hatched.

NAME | DATE

Estimates & Exact Answers page 1 of 2

1 Use estimation to answer each question yes or no.

a Sue has $346 dollars. She wants to buy a bike and still have $150 left. She found a bike that costs $189. Can she buy it and still have $150 left?

Yes

b Bruce decided to give away some of his 400 baseball cards. He wants to keep at least 150 of them. If Bruce gives one friend 167 cards and another friend 112 cards, will he have at least 150 left?

No

c Luis and Carlos are in a reading contest to see who can read the most pages. Luis wants to win by at least 150 pages. Carlos read 427 pages. If Luis reads 526 pages, will he win by at least 150 pages?

No

2 Estimate and solve.

- ○ First, estimate the difference between the two numbers.
  You could round them and then subtract, or you could think about what you have to add to the smaller number to get to the bigger number.
- ○ Then find the exact difference between the two numbers.
- ○ Check your answer with your estimate to be sure it makes sense: if it doesn't make sense, check your work or do it another way.

Numbers to Subtract	Estimated Difference	Exact Difference
a 487 − 309	**Student estimations will vary.**	**178**
b 1,825 − 643	**Student estimations will vary.**	**1,182**

(continued on next page)

NAME | DATE

Estimates & Exact Answers page 2 of 2

Show all your work when you solve these problems.

3 Angie's grandma lives in Cleveland, Ohio, and is going to drive to Minneapolis, Minnesota, to visit Angie and her family. The two cities are 752 travel miles apart, and it takes 12 hours to drive that far.

a Angie's grandma wants to do the drive in two days. If she drives the same amount each day, how many miles will she drive each day?

376 miles.
Work will vary.

b How many hours will she spend driving each day?

6 hours
Work will vary.

4 **CHALLENGE** Christy's family is driving from St. Louis, Missouri, to Boston, Massachusetts, to visit her cousins. The distance is 1,162 miles, and the driving time is 17 hours and 38 minutes. Christy's mother wants to do the drive in 3 days, going about the same number of miles each day.

a About how many miles will they drive each day?

About 388 miles each day.
Work will vary.

b About how many hours will they spend driving each day?

About 5 hours (53 minutes)
Work will vary.

NAME | DATE

Jump Rope for Charity page 1 of 2

1 Solve each problem below. You may use any strategy that is efficient for you. Be sure to show your work.

a Tyson and Amanda are jumping rope to raise money for charity. Amanda jumped rope 295 times. Tyson jumped 316 times. How many times total did they jump?

They jumped 611 times.
Work will vary.

b Beck and Sam are also jumping rope for charity. Beck jumped 345 times. Sam jumped 255 times. How many times did they jump in all?

They jumped 600 times.
Work will vary.

c Loretta and Claire are shooting baskets to raise money for field trips. Loretta made 123 baskets. Claire made 128 baskets. How many baskets did they make together?

They made 251 baskets.
Work will vary.

NAME | DATE

Jump Rope for Charity page 2 of 2

2 Solve the two problems below, using any strategy you choose. Be sure to show your work.

275 + 336 **611**	189 + 332 **521**
Work will vary.	

3 **CHALLENGE** Stella and Colette are jumping rope to raise money for the local Children's Hospital. Every time they jump 100 times, they earn one dollar. Stella jumped 487 times. Collette jumped 464 times. Did Stella and Colette jump enough times to raise $10 for the Children's Hospital? Show all your work.

No, they did not. Student explanations will vary.
Example: They would need 1,000 jumps to earn $10, and 487 + 467 < 1 ,000.

NAME | DATE

Which Strategy? page 1 of 2

Note to Families

At school, we have been exploring the standard (or traditional) algorithm for addition. Another name for this strategy is the regrouping method. We've compared the standard algorithm to other strategies we have learned this year. Ask your child questions about the strategies he or she is using.

1 Use the standard algorithm to solve each problem. Then solve it a different way. Label your method. Circle the strategy that seemed quicker and easier.

	Standard algorithm	Different
a 265 + 178 =	265 + 178 443	Work will vary. Example: 200 + 100 = 300 60 + 70 = 130 5 + 8 = 13 300 + 130 + 13 = 443
b 213 + 198 =	213 + 198 411	Work will vary. Example: 198 + 2 = 200 213 – 2 = 211 200 + 211 = 411
c 234 + 342	234 + 342 576	Work will vary. Example: 234 – 34 = 200 342 + 34 = 376 200 + 376 = 576
d 168 + 143	168 + 143 311	Work will vary. Example: 160 + 140 = 300 8 + 3 = 11 300 + 11 = 311

2 Conrad is making bread. After he mixes the ingredients together, he has to let the bread rise for 95 minutes. Then, the bread will bake for 58 minutes.

a How long will it take for the bread to rise and bake? Show your thinking using numbers, sketches, or words.

153 minutes; work will vary.

b What strategy did you use to solve this problem? Why?

Explanations will vary.

(continued on next page)

NAME | DATE

Which Strategy? page 2 of 2

3 Saima is training for a bike race. On Saturday, she rode her bike for 172 minutes. On Sunday, she rode for 153 minutes.

a How much longer did she ride her bike for on Saturday than on Sunday? Show your thinking using numbers, sketches, or words.

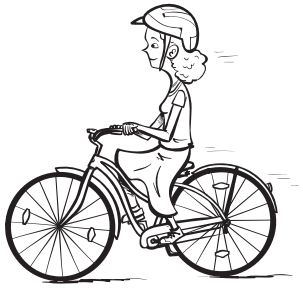
19 minutes
Work will vary.

b What strategy did you use to solve this problem? Why?

Responses will vary.

c **CHALLENGE** Before she rides her bike, Saima warms up for 12 minutes. On Tuesday, Saima rode her bike for 52 miles. If it takes Saima 6 minutes to ride each mile, how long did it take for Saima to warm up and ride her bike on Tuesday?

324 minutes
Work will vary.



Combinations of 1,000

4 Fill in the missing numbers to make a total of 1,000 in each box.

480 + **520** = 1,000 670 + **330** = 1,000 170 + **830** = 1,000

210 + **790** = 1,000 720 + **280** = 1,000 500 + **500** = 1,000

840 + **160** = 1,000 360 + **640** = 1,000

NAME | DATE

Estimates, Sums & Story Problems page 1 of 2

1 Round each pair of numbers to the nearest ten, and then add the rounded numbers to estimate the sum. Then use any strategy you like to find the exact sum. Compare the exact sum to your estimate to make sure that it makes sense. If your answer does not make sense, double-check your work or solve the problem another way.

Number to Add	Round & Add	Exact Sum	Check your answer if the sum and estimate were far apart.
a 386 + 275	390 + 280 = 670	661	Student work will vary.
b 517 + 378	520 + 380 = 900	895	Student work will vary.
c 263 + 477	260 + 480 = 740	740	Student work will vary.

2 Use estimation to answer each question yes or no. Do not find exact sums.

a Shawna has a photo album with space for 160 pictures. She has 33 pictures of her family, 48 pictures from summer camp, and 57 pictures from school. Does she have enough pictures to fill the photo album?

No

b Fred needs 410 game markers to play a game with his classmates and their families on Family Math Night. He has 96 red markers, 123 blue markers, 106 yellow markers, and 72 green markers. Does he have enough game markers to play the game?

No

(continued on next page)

NAME | DATE

Estimates, Sums & Story Problems page 2 of 2

3 Jasmine's neighbor paid her $32 for helping with some yard work. Jasmine gave her brother $8 because he helped her with some of the work. Then she went shopping with the rest of the money. She bought 3 books that were $6 each and a bottle of juice for $2. How much money did she have left? Show all your work.

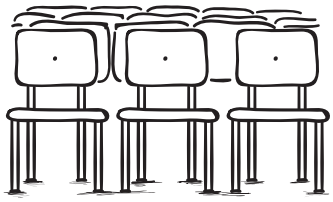
$4
Work will vary.

4 The third graders are putting on a play for the fourth and fifth graders. They need to set up chairs in the gym for the fourth and fifth graders to sit on. There are 86 fourth graders, 79 fifth graders, 3 fourth grade teachers, and 3 fifth grade teachers. How many chairs will the third graders need to set up? Show all your work.

171 chairs
Work will vary.

5 **CHALLENGE** The third graders can put no more than 20 chairs in a row. How many rows of chairs will they need? Show all your work.

9 rows
Work will vary.



NAME | DATE

Writing Time in Different Ways page 1 of 2

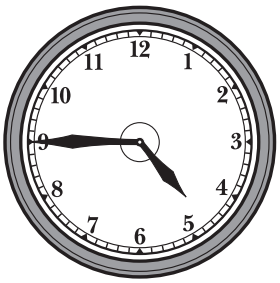
Word Bank				
1 one	2 two	3 three	4 four	5 five
6 six	7 seven	8 eight	9 nine	10 ten
11 eleven	12 twelve	20 twenty	30 thirty	40 forty
50 fifty	60 sixty	o'clock		

1 Write the time shown on each clock with numbers. Write it again with words.

ex

3:55
three fifty-five

a



4:45
four forty-five

b

2:35
two thirty-five

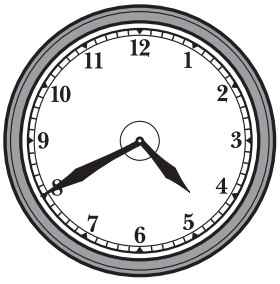
c

2:50
two fifty

d

1:15
one fifteen

e



4:40
four forty

2 How many minutes are there in an hour? 60

(continued on next page)

NAME | DATE

Writing Time in Different Ways page 2 of 2

Word Bank		
15 fifteen	30 thirty	45 forty-five
quarter past	half past	quarter 'til

3 Write the time shown on each clock with number words. Write it again with time telling words.

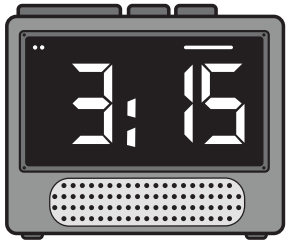
ex

four forty-five
quarter 'til five

a

six thirty
half past six

b

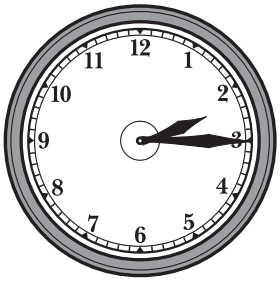


three fifteen
quarter past three

c

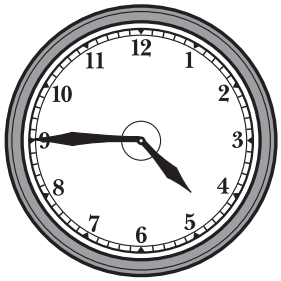
eight forty-five
quarter 'til nine

d



two fifteen
quarter past two

e



four forty-five
quarter 'til five

4 **CHALLENGE** How many minutes are there in the following fractions of an hour?

$\frac{2}{4}$ of an hour ___30___ $\frac{3}{4}$ of an hour ___45___ $\frac{1}{3}$ of an hour ___20___

$\frac{1}{6}$ of an hour ___10___ $\frac{3}{6}$ of an hour ___30___ $\frac{1}{12}$ of an hour ___5___

$\frac{2}{3}$ of an hour ___40___ $\frac{5}{12}$ of an hour ___25___

NAME | DATE

Annie's School Day page 1 of 2

1 Annie is a third grader at Bridger School. There are two clocks in her classroom. One is a digital clock, and the other is an analog clock with a regular clock face. Read the clocks below, and write the time to show when the class does different activities through the day.

a School starts at 8:20.

b Reading starts at 8:35.

c Recess is over at 10:20, but by the time the kids got back to class today, it was 10:22.

d On Tuesdays and Thursdays, Annie's class has gym at 11:25, but today they got there a little early, at

11:20.

e Recess starts at 10:00, but Annie's class is sometimes a few minutes late getting out to the playground. Today, they got out at

10:03.

f Lunch starts at 11:50, and then the kids have recess again. Annie and her friends didn't get out to the playground until 12:17 today.

g Annie's teacher always reads a chapter book to the class after lunch recess. It took the kids a few minutes to get settled, so Mr. Willis didn't start reading until

12:36.

h Math always starts at 1:00, but Mr. Willis got finished with the book a couple of minutes early, so the class started math at 12:58.

(continued on next page)

NAME | DATE

Annie's School Day page 2 of 2

Show your thinking in numbers, words, or sketches when you solve these problems.

2 Annie measured the cover of her library book using jumbo paperclips. She found that it is 5 paperclips high and $4\frac{1}{2}$ paperclips wide. A jumbo paperclip is 5 centimeters long.

a How many centimeters high is the cover of Annie's library book?

25 cm
Work will vary.

b How many centimeters wide is the cover of Annie's book?

22 ½ cm
Student work will vary.

3 **CHALLENGE** Annie's reading class begins at 8:35 and lasts 1 hour and 45 minutes. What time is her reading class over? Show two different ways to find the answer.

a One way:

Student responses will vary.

b Another way:

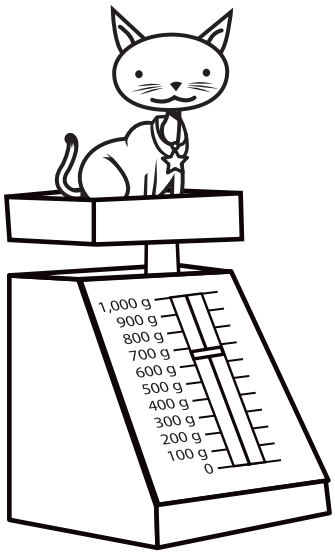
Student responses will vary.

Annie's reading class is over at **10:20**.

NAME | DATE

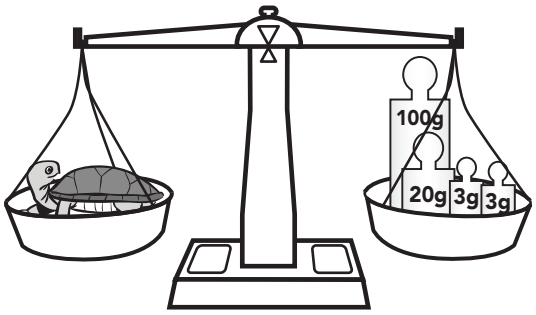
Measuring Mass & Weight page 1 of 2

1 Read the scale. How much does the kitten weigh?



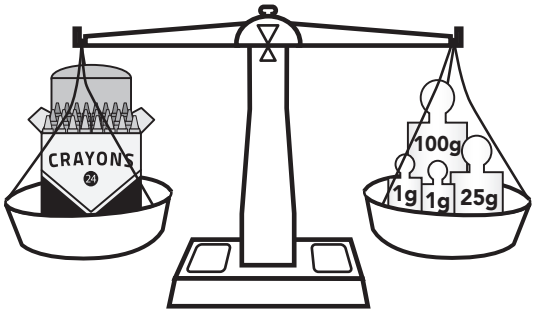
650 g

2 Look at the pan balance scale. What is the mass of the turtle?

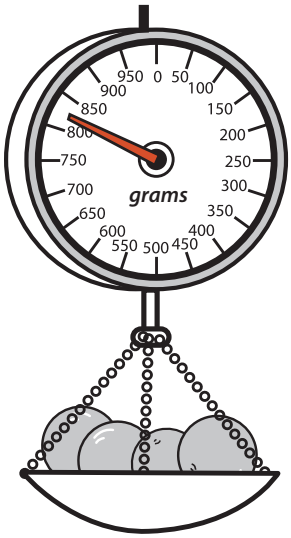


126 g

3 The mass of the box of crayons is 127 g.

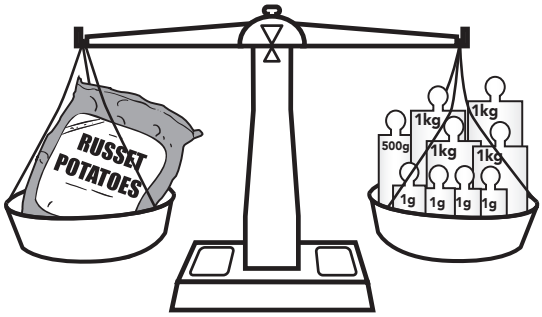


4 Read the scale. How much do the oranges weigh?



825 g

5 Look at the pan balance scale. What is the mass of the bag of potatoes in grams? Show your work.



4,504 g
Work will vary.

(continued on next page)

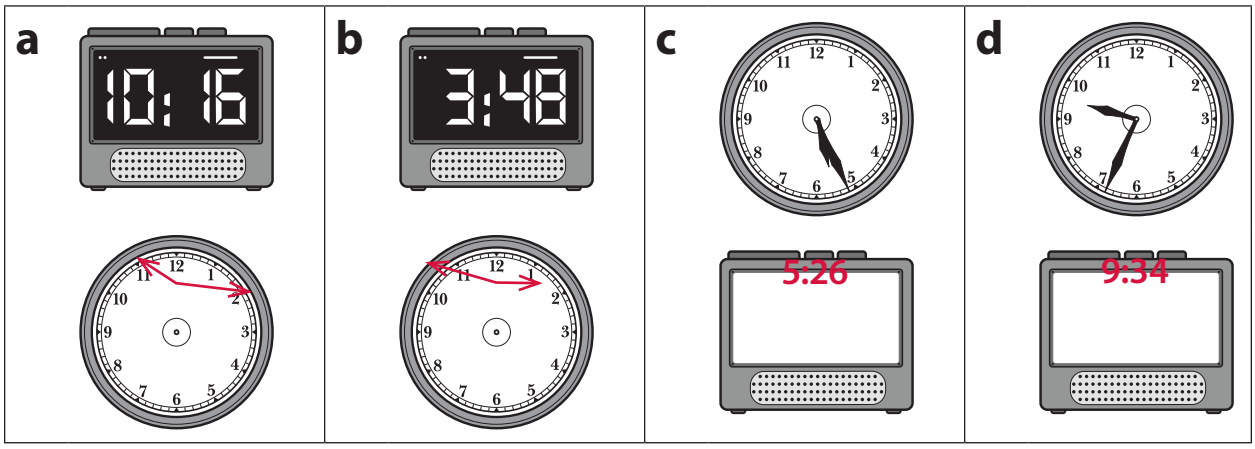
NAME | DATE

Measuring Mass & Weight page 2 of 2

6 What is the total mass of Sarina's lunch, including her lunchbox, if her sandwich is 180 grams, her apple is 125 grams, and her cookies are 35 grams each? The lunch box itself has a mass of 350 grams. Sarina has 4 cookies in her lunch. Show your work.

795 g
Work will vary.

7 Draw the hands on the analog clocks to show the times on the digital clocks for **a** and **b** below. Write the times shown on the analog clocks on the digital clocks for **c** and **d** below.



8 **CHALLENGE:** Sarina's piano teacher gave her a large candy bar. One serving has a mass of 39 grams. The candy bar has 2 and $\frac{1}{2}$ servings. What is the mass of the whole candy bar? Show all of your thinking.

97. 5 grams

NAME | DATE

Metric Measures of Mass & Liquid Volume page 1 of 2

1 What unit would you use to measure the mass of the following items? Circle the correct answer.

a The mass of an envelope

(grams) kilograms

b The amount of soda a straw can hold

(milliliters) liters

c The mass of a 3rd grader.

grams (kilograms)

d The amount of milk in a container at school

(milliliters) liters

e The mass of a loaf of bread

(grams) kilograms

f The amount of water used to take a bath

milliliters (liters)

g The amount of milk in a cake recipe

(milliliters) liters

h The amount of gasoline in a car

milliliters (liters)

i The mass of an apple

(grams) kilograms

j The amount of cough medicine you take

(milliliters) liters

k The mass of a television

grams (kilograms)

(continued on next page)

NAME | DATE

Metric Measures of Mass & Liquid Volume page 2 of 2

Responses will vary.

2 Go on a scavenger hunt at home. Try to find objects that have a mass of about 1 gram and about 1 kilogram. Record them below.

1 gram (g)	1 kilogram (kg)

3 Now try to find containers that hold about 1 milliliter and 1 liter. Record them below.

1 milliliter (ml)	1 liter (l)

4 What object in your home do you think has the most mass?

a About how much mass does it have in kilograms?

b What object in your home probably has the least mass?

5 What container in your home do you think has the largest capacity (holds the most liquid)?

a About how many liters do you think it holds?

b What container in your home probably has the smallest capacity?

NAME | DATE

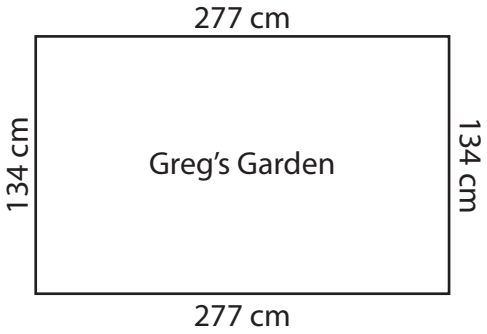
Grasshopper Math page 1 of 2

Grasshoppers are insects that can jump 10 times their height. Help Greg Grasshopper solve the problems below. Use the correct unit in your answer. Use numbers, sketches, or words to show your work.

1 Greg Grasshopper has a mass of 3 grams. He climbs onto a leaf with 9 other grasshoppers that each have a mass of 3 grams. Then 4 grasshoppers jump off of the leaf. What is the total mass of the grasshoppers that are still on the leaf?

18 grams; work will vary.

2 Greg Grasshopper lives in a rectangular garden. One side of the garden is 134 cm long. The other side is 277 cm long. If Greg Grasshopper walks all the way around his garden 2 times, how far has he walked?



1,644 cm;
student work will vary.

3 Walking always makes Greg Grasshopper hungry. After he walked around his garden twice, he ate 387 milligrams of grass and 246 milligrams of leaves. How many milligrams did he eat?

633 milligrams; work will vary.

4 Then Greg was tired. He fell asleep for 2 hours. When he woke up, it was 3:45. What time did he fall asleep?

He fell asleep at 1:45; work will vary.

(continued on next page)

NAME | DATE

Grasshopper Math page 2 of 2

5 Greg Grasshopper has three cousins: Gary, Grant, and Garth. They all can jump 10 times farther than their length. Figure out how many jumps each cousin needs to make to travel a distance of 9 meters. (Hint: There are 100 centimeters in a meter.) Use numbers, sketches, or words to show your work.

a Gary is 3 centimeters long.

Work will vary. Example:
3 × 10 = 30 cm jump length
9 m = 900 cm
900 cm ÷ 30 cm/jump = 30 jumps

Gary has to make ___30___ jumps to travel a distance of 9 meters.

b Garth is 5 centimeters long.

Work will vary. Example:
5 × 10 = 50 cm jump length
9 m = 900 cm
900 cm ÷ 50 cm/jump = 18 jumps

Garth has to make ___18___ jumps to travel a distance of 9 meters.

c **CHALLENGE** Grant is 4 centimeters long.

Work will vary. Example:
4 × 10 = 40 cm jump length
9 m = 900 cm
900 cm ÷ 40 cm/jump = 22 ½ jumps

Grant has to make ___23___ jumps to travel a distance of 9 meters.

NAME | DATE

Sharing Candy Bars & Measuring page 1 of 2

1 You are sharing a candy bar with friends.

a If you share with one person, there are two of you sharing. How do you write your share?

½

b If you share with two people, there are three of you sharing. How do you write your share?

⅓

c Would you have more candy if you share with one person or two people? Explain your answer.

You have more candy when you share with one person.
Student explanations will vary.

2 Circle the appropriate words to fill in the blanks.

a A bowling ball is heavy! I would measure its _____ with _____.

mass length volume | liters kilograms grams

b A sun jellyfish is pretty long. I would measure its _____ with _____.

mass length volume | liters kilograms centimeters

c A water bottle doesn't hold much. I would measure its _____ with _____.

mass length volume | liters kilograms milliliters

d A giraffe is tall. I would measure its _____ with _____.

mass height volume | liters kilograms meters

e An elephant eats lots! I would measure the _____ of its food with _____.

mass length volume | liters kilograms meters

f An Etruscan shrew is short. I would measure its _____ with _____.

mass length volume | liters kilograms centimeters

g An Etruscan shrew is light. I would measure its _____ with _____.

mass length volume | grams kilograms meters

h That bucket holds a lot! I would measure its _____ with _____.

mass length volume | liters kilograms meters

(continued on next page)

NAME | DATE

Sharing Candy Bars & Measuring page 2 of 2

Show all your thinking with numbers, words, or sketches for each of the problems below. Label your answers with the correct units.

3 A bottle of Charlie's favorite brand of orange juice has 7 servings. Each serving is 240 milliliters (ml).

a How many milliliters of orange juice are in the whole bottle?

1,680 milliliters; work will vary.

b Is that more or less than 2 liters? (Hint: 1 liter = 1,000 milliliters)

Less; work will vary.

4 **CHALLENGE** A box of soup contains 4 servings. Each serving has $4\frac{1}{2}$ grams of fat and 720 milligrams of sodium.

a If someone was really hungry and ate all 4 servings in the box, how many grams of fat would that person eat?

18 grams; work will vary.

b How many milligrams (mg) of sodium would that person eat? (1 gram = 1,000 milligrams)

2,880 milligrams; work will vary.

c It is recommended that people eat no more than 2,400 mg of sodium in a day. If a person ate a whole box of the soup, would that person take in more or less than 2,400 mg?

More; work will vary.

d How many milligrams more or less?

480 milligrams more; work will vary.

NAME | DATE

Measurement & Fractions page 1 of 2

1 Circle the appropriate words to fill in the blank.

a A piece of paper is light! I would measure its _____ with _____.

mass length volume | milliliters grams centimeters

b That pencil is short! I would measure its _____ with _____.

mass length volume | milliliters grams centimeters

c A soda can doesn't hold very much. I would measure its _____ with _____.

mass length volume | milliliters grams centimeters

2 Circle your answer.

a Which is longer—half of a day or half of an hour?

b Which is heavier—half of a gram or half of a kilogram?

c Which holds more—half of a milliliter or half of a liter?

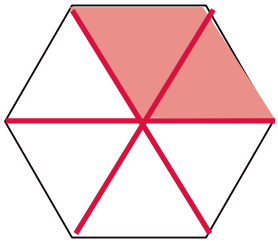
3 Write the correct symbol: < or > or =

$\frac{1}{4}$ > $\frac{1}{10}$ $\frac{1}{4}$ < $\frac{1}{2}$ $\frac{1}{4}$ < 1

4 Choose one pair of fractions from problem 3. Discuss your answer. How do you know that one of the numbers is more than the other?

Student responses will vary.

5 Divide the shape into the number of parts you need, and shade in the fraction $\frac{1}{3}$.



Work will vary. Example above:

(continued on next page)

NAME | DATE

Measurement & Fractions page 2 of 2

6 My friends and I are sharing a candy bar. I got $\frac{1}{4}$ of the candy bar, and my friend Abby got $\frac{1}{4}$ of it. How much is left? Explain your answer.

There is ½ left.
Student explanations will vary.

7 Tam filled his wading pool with 150 liters of water. Then 138 liters splashed out. How many liters are still in the pool? Write and solve an equation to represent the problem.

12 liters
150 – 138 = 12

8 A bottle of Lilly's favorite soda contains 590 milliliters of soda, has 260 calories, and 70 grams of carbohydrates. Lilly is going to share the bottle with Maddy, so each will get half the bottle. Show your work. Include the unit of measurement in your answer.

Work will vary.

a How many milliliters of soda will Lilly drink?

295 ml

b How many calories will Maddy get?

130 calories

c How many grams of carbohydrates will each girl get?

35 g

Use a separate sheet of paper to show your thinking using words, sketches, or numbers to solve the problems below.

Work will vary.

9 **CHALLENGE** Chris is looking at a map to see how many miles it is from Golden Valley, where he lives, to Willow Lake, where his grandmother lives. The map uses a scale where $1\frac{1}{2}$ inches represents 12 miles.

a Chris measured the map distance between the two towns and found that it is 6 inches. How many miles is it from Golden Valley to Willow Lake?

48 miles

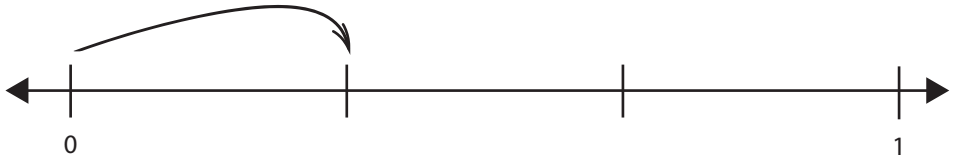
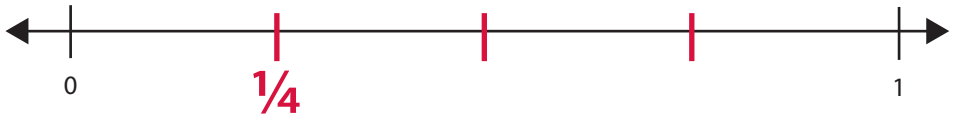
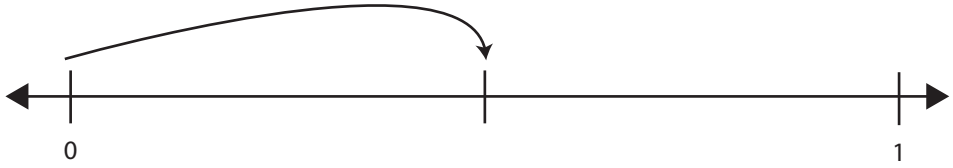
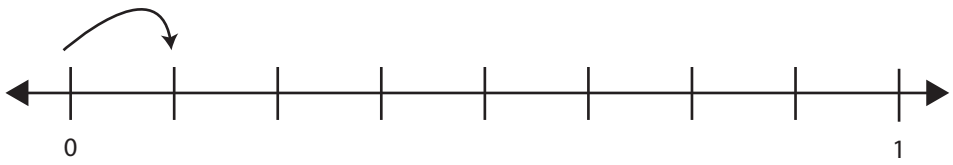
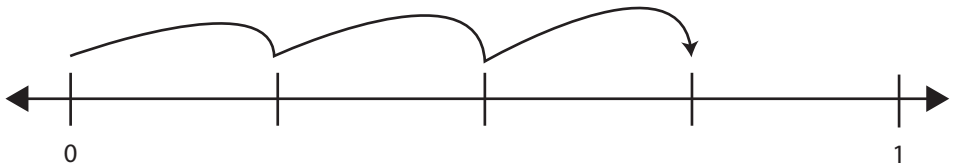
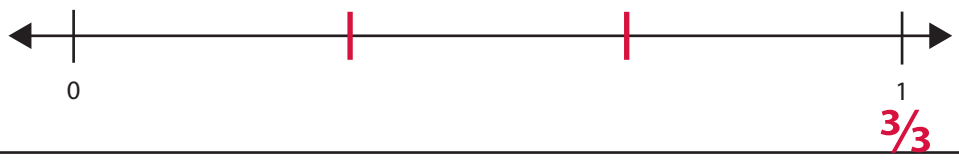
b Chris will take the train to Willow Lake. The train goes 60 miles an hour. If Chris takes the 2:20 train, about what time will he get to Willow Lake?

A little bit after 3:00

NAME | DATE

Fractions, Fractions & Fractions page 1 of 2

1 Complete the missing information below by writing in the fraction number or sketching the given fraction on a number line.

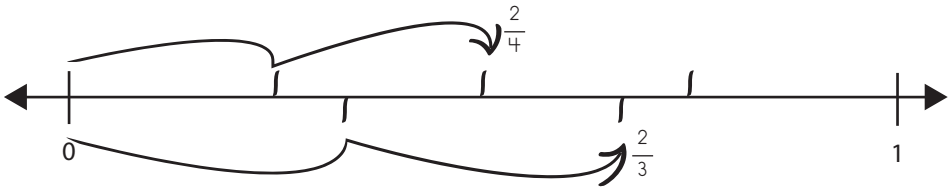
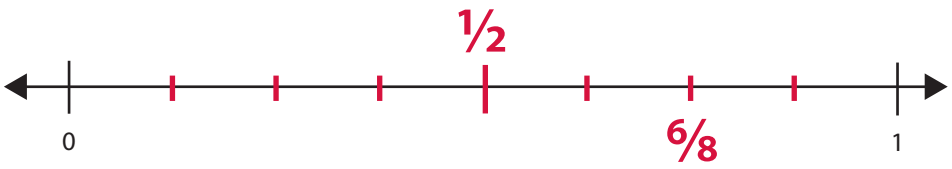
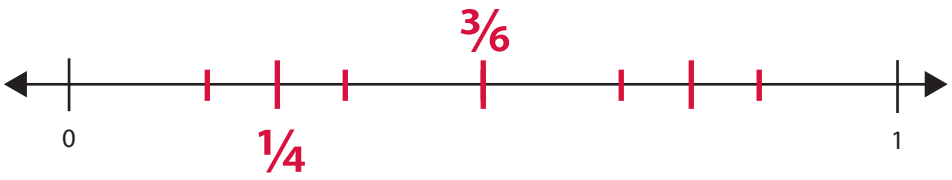
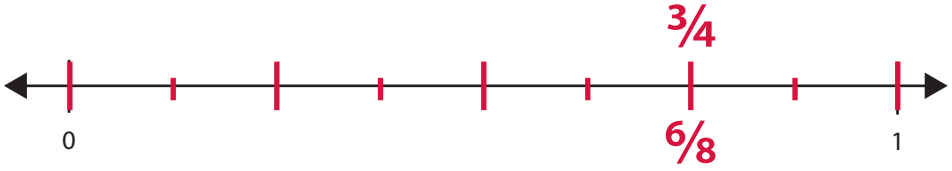
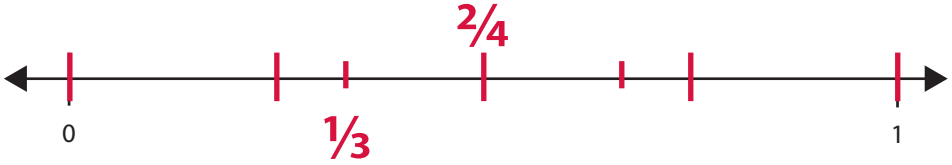
Fraction	Number Line
ex $\frac{1}{3}$	
a $\frac{1}{4}$	
b 1/2	
c $\frac{1}{6}$	
d 1/8	
e $\frac{2}{4}$	
f 3/4	
g $\frac{3}{3}$	

(continued on next page)

NAME | DATE

Fractions, Fractions & Fractions page 2 of 2

2 Use a < (less than), > (greater than) or = (equal) symbol to compare the following fraction pairs. Show your thinking by placing the fractions on the number line.

Fraction	Number Line
ex $\frac{2}{4} < \frac{2}{3}$	
a $\frac{1}{2} < \frac{6}{8}$	
b $\frac{3}{6} > \frac{1}{4}$	
c $\frac{3}{4} = \frac{6}{8}$	
d $\frac{2}{4} > \frac{1}{3}$	

NAME | DATE

Snack Time: Mass, Volume & Length page 1 of 2

1 Use numbers, words, or sketches to show your thinking for problems a, b, and c. Don't forget to include the unit of measurement in your answers.

a Carl ate an apple that had a mass of 184 grams. Then, he ate 196 grams of peanuts. What was the total mass of Carl's snack?

380 grams; work will vary.

b Allegra drank 203 milliliters of water. Then, she drank 157 milliliters of lemonade. How many milliliters of liquid did Allegra drink in all?

360 ml; work will vary.

c Mr. Alcott's class was eating licorice twists for a special treat. They ate 117 feet of licorice twists. Mrs. Austen's class was also eating licorice twists. They ate 79 feet of licorice twists. How many more feet of licorice twists did Mr. Alcott's class eat?

38 more feet; work will vary.

2 What unit do you use? Circle the unit you would use for each type of measurement.

Length	liters	kilograms	centimeters
Mass	grams	inches	milliliters
Volume	milligrams	milliliters	meters

(continued on next page)

NAME | DATE

Snack Time: Mass, Volume & Length page 2 of 2

Use numbers, words, or sketches to show your thinking for all these problems. Don't forget to include the unit of measurement in your answers.

3 Mike has a can of potato chips. There are 16 chips in one serving, and one serving has a mass of 28 grams.

a What is the mass of 3 servings?

84 g; work will vary.

b One serving of the potato chips has 150 calories. How many calories are in 3 servings?

450 calories; work will vary.

c One serving of the potato chips has 160 milligrams of sodium. How many milligrams of sodium are in 3 servings?

480 mg; work will vary.

4 One can of potato chips has 5 servings. Each serving has 15 grams of carbohydrates.

a How many grams of carbohydrates are in a whole can of potato chips?

75 g; work will vary.

b **CHALLENGE** How many cans of potato chips are needed for 14 people to each have 3 servings?

9 cans; work will vary.

NAME | DATE

Time & Fraction Review page 1 of 2

1 Fill in the circle next to the time shown on each clock.

a
- ○ 1:45
- ○ 1:47
- ○ 2:47
- ● 9:09

b
- ○ 3:40
- ○ 8:04
- ○ 8:19
- ● 8:20

2 Write the time shown on each clock.

a 4 : 28

b 11 : 50

3 Circle the digital clock that shows the same time as this analog clock.

4 Taylor's mom said he and his brother could go to a movie while she went shopping. She dropped them off at the theater at 1:45 and said she would be back at 4:00 to get them. They had three choices of movies. Which movie could they see and be done by the time their mom came to get them? Show all your work. Hint: Remember that there are 60 minutes in an hour.

Movie	Start Time	Length (Including Previews)
Beetle goes to Town	1:55	130 minutes
Arctic Adventure	2:00	125 minutes
Rainy Day Dog	2:15	100 minutes

Work will vary.

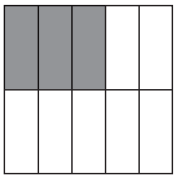
(continued on next page)

NAME | DATE

Time & Fraction Review page 2 of 2

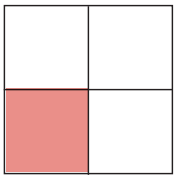
5 On each square, fill in a fraction of the square that is less than $\frac{1}{2}$. Then use the symbols >, =, or < to compare your fraction to $\frac{1}{2}$.

ex



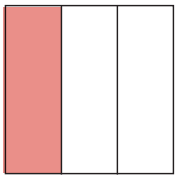
$\frac{3}{10} < \frac{1}{2}$

a



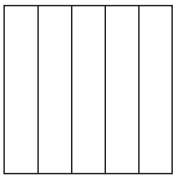
¼ < ½
or
½ > ¼

b



⅓ < ½
or
½ > ⅓

c

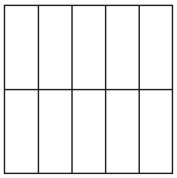


⅕ < ½ or ½ > ⅕
or
⅖ < ½ or ½ > ⅖

Work will vary.

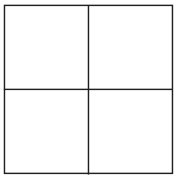
6 On each square, fill in a fraction of the square that is greater than $\frac{1}{2}$. Then use the symbols >, =, or < to compare your fraction to $\frac{1}{2}$.

a



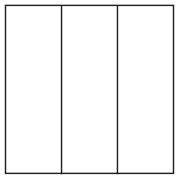
Any fraction
> or = ⁶⁄₁₀ (⅗)
is correct

b



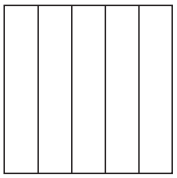
Any fraction
> or = ¾
is correct

c



Any fraction
> or = ⅔
is correct

d

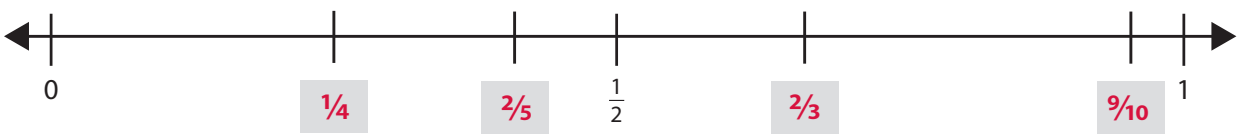


Any fraction
> or = ⅗
is correct

Work will vary.

7 Write each of the following fractions where they belong on the number line below.

$\frac{9}{10}$	$\frac{1}{4}$	$\frac{2}{5}$	$\frac{2}{3}$



NAME | DATE

Sharing Money page 1 of 2

Show your work as you solve these problems.

1 Tom and Zara have a dog-walking business. They walk their customers' dogs together and share all the money they make equally.

a On Monday they made $4.00. How much does each of them get?

$2.00; work will vary.

b On Tuesday they made $5.00. How much does Tom get?

$2.50; work will vary.

c On Wednesday they made $5.50. How much does Zara get?

$2.75; work will vary.

2 Lately, Tom and Zara and their little sister, Molly, have been incredibly lucky at finding money.

a On the way home from school on Thursday they found $3.00. How much does each one get if the three of them share equally?

$1.00 each; work will vary.

b On Friday they found $6.00. How much does each one get?

$2.00 each; work will vary.

3 **a** Tom, Zara, Molly, and their cousin, Kerry, are sharing $4.00. How much does Tom get?

$1.00; work will vary.

b Now the four of them are sharing $8.00. How much does Zara get?

$2.00; work will vary.

c If Tom, Zara, Molly, and Kerry share $2.00, how much does Molly get?

$0.50; work will vary.

d If the four of them share $1.00, how much does Kerry get?

$0.25; work will vary.

(continued on next page)

NAME | DATE

Sharing Money page 2 of 2

Show your work when you solve these problems.

4 Erin and Devon are playing a game. Erin has 42 points. If Devon had 14 more points, he'd have double the points Erin has. How many points does Devon have?

70 points; work will vary. Example:
42 + 42 = 84
84 – 14 = 70

5 **CHALLENGE** The kids in Mrs. B's class did a survey about their favorite flavors of ice cream. One-fourth of the class likes strawberry the best. One-half of the class likes chocolate the best. The rest of the class, 7 kids, said vanilla is their favorite ice cream flavor. How many kids are in Mrs. B's class?

28 kids; work will vary. Example:
¼ + ½ = ¾
Three-fourths of the class likes either strawberry or chocolate. The rest of the class, 7 kids, like vanilla. Those 7 kids are ¼ of the class, so there must be 28 kids in the class (7 × 4 = 28).

NAME | DATE

Multiply & Divide by 4 & 8

1 Fill in the missing numbers. Also write an equation for each picture.

ex 1 skateboard has 4 wheels. 1 × 4 = 4

ex 2 skateboards have 8 wheels. 2 × 4 = 8

a 3 skateboards have 12 wheels. 3 × 4 = 12

b 4 skateboards have 16 wheels. 4 × 4 = 16

c 5 skateboards have 20 wheels. 5 × 4 = 20

d 10 skateboards have 40 wheels. 10 × 4 = 40

2 My friends and I went to the skateboard park. We saw 16 wheels rolling up and down the ramps. How many skateboards did we see? Fill in the bubble beside the matching expression and fill in the answer.

- ○ 15 ÷ 3 = _____
- ○ 16 ÷ 2 = _____
- ● 16 ÷ 4 = 4
- ○ 24 ÷ 6 = _____

(continued on next page)

NAME | DATE

Multiply & Divide by 4 & 8

3 Fill in the missing numbers. Also write an equation for each picture.

ex 1 octopus has 8 legs. 1 × 8 = 8

ex 2 octopuses have 16 legs. 2 × 8 = 16

a 3 octopuses have 24 legs. 3 × 8 = 24

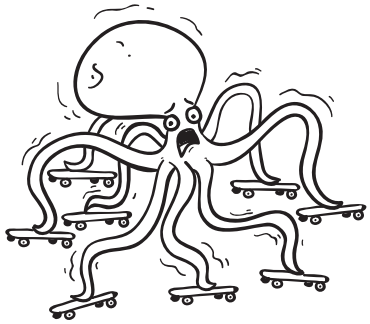
b 4 octopuses have 32 legs. 4 × 8 = 32

c 5 octopuses have 40 legs. 5 × 8 = 40

d 10 octopuses have 80 legs. 10 × 8 = 80

4 James and his brother went to the Sea Life Aquarium. When they got to the octopus tank, they saw 24 legs waving at them. How many optopuses did they see in the tank? Fill in the bubble beside the matching expression and fill in the answer.

- ○ 24 ÷ 6 = _____
- ● 24 ÷ 8 = 3
- ○ 8 ÷ 8 = _____
- ○ 24 × 2 = _____



NAME | DATE

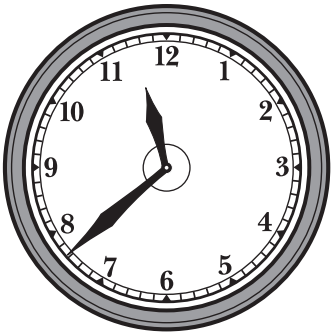
Telling Time to the Minute page 1 of 2

1 Fill in the circle next to the time shown on each clock.

a

- ○ 8:30
- ● 7:27
- ○ 5:35
- ○ 7:05

b

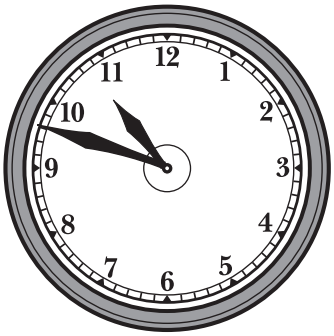


- ○ 7:55
- ○ 11:08
- ● 11:38
- ○ 11:40

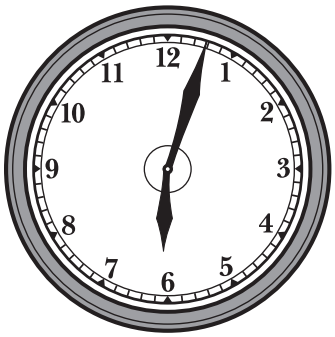
2 Write the time shown on each clock.

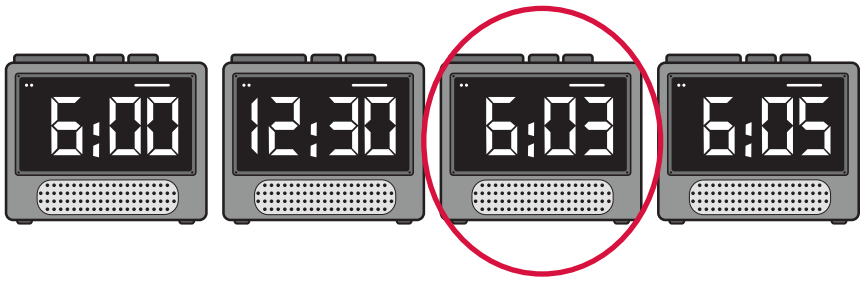
a 2 : 36

b 10 : 48



3 Circle the digital clock that shows the same time as this analog clock.





4 **CHALLENGE** What fraction of a clock is represented if the hands are at 12 and 3?

Student work will vary. Examples:
¼ or ¾

(continued on next page)

NAME | DATE

Telling Time to the Minute page 2 of 2

Show your work when you solve these problems.

5 Bike riders like to hold weekend events called centuries. A century, for a bike rider, is a ride that's 100 miles long. For people who don't want to ride 100 miles in one day, they have half-centuries and quarter-centuries.

a How many miles would you ride if you rode a half-century?

50 miles; work will vary.

b How many miles would you ride if you rode a quarter-century?

25 miles; work will vary.

6 Sarah is saving money to buy a microscope. She has saved $25 so far. That's $\frac{1}{3}$ of the cost of the microscope.

a How much does the microscope cost?

$75; work will vary.

b **CHALLENGE** How much more money does Sarah need to save to have $\frac{1}{2}$ the cost of the microscope?

$12.50; work will vary.

NAME | DATE

Multiplication & Division Review page 1 of 2

1 Complete the multiplication facts.

2 × 3 = 6	4 × 5 = 20	7 × 5 = 35	2 × 6 = 12	10 × 8 = 80	9 × 2 = 18	7 × 3 = 21
0 × 2 = 0	5 × 6 = 30	7 × 2 = 14	3 × 5 = 15	9 × 5 = 45	5 × 5 = 25	3 × 8 = 24
8 × 2 = 16	5 × 8 = 40	7 × 1 = 7	4 × 6 = 24	6 × 6 = 36	7 × 4 = 28	4 × 8 = 32

2 Complete the division facts.

10 ÷ 5 = 2 | 9 ÷ 1 = 9 | 20 ÷ 10 = 2

50 ÷ 5 = 10 | 30 ÷ 5 = 6 | 18 ÷ 2 = 9

3 Frank, Joe, and Carl went with their grandma to the bakery. She said that they could use the change she got back to buy mini-chip cookies to share equally. She bought a cake for $11 and two loaves of bread for $2.70 each. She paid with a $20 bill. The mini-chip cookies cost 40¢ each. How many cookies did each boy get? Show all your work.

3 cookies; work will vary.

(continued on next page)

NAME | DATE

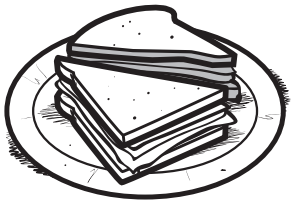
Multiplication & Division Review page 2 of 2

4 a Rosa and Clarice are making sandwiches for all the students in their class and their teacher. There are 23 students in their class. Each loaf of bread has 16 slices. They don't want to use the slices on the ends of the bread, because most students don't like them. If they make 1 sandwich for each student and for the teacher, how many loaves of bread will they need? Show all your work.

4 loaves; work will vary.

b Rosa and Clarice realized they would have some bread left over (not including the end pieces), so they decided to make sandwiches for the librarian, office staff, and custodian. How many sandwiches will they be able to make?

4 sandwiches; work will vary.



NAME | DATE

Multiplying by 2, 3, 4 & 8 page 1 of 2

1 Circle all the Doubles facts (×2) in blue. Then go back and do them.

2 Circle all the Doubles Plus One Set facts (×3) in red. Then go back and do them.

4 × 2 = 8	3 × 3 = 9	2 × 3 = 6	6 × 2 = 12	2 × 6 = 12
5 × 2 = 10	3 × 10 = 30	8 × 3 = 24	0 × 2 = 0	1 × 3 = 3
5 × 3 = 15	2 × 1 = 2	8 × 2 = 16	3 × 9 = 27	2 × 2 = 4
6 × 3 = 18	10 × 2 = 20	3 × 7 = 21	4 × 3 = 12	7 × 2 = 14

3 Now solve the division problems below. Use the multiplication facts above to help.

9 ÷ 3 = 3	16 ÷ 8 = 2	21 ÷ 7 = 3	14 ÷ 7 = 2	10 ÷ 5 = 2
12 ÷ 4 = 3	20 ÷ 10 = 2	15 ÷ 5 = 3	24 ÷ 8 = 3	6 ÷ 3 = 2

(continued on next page)

NAME | DATE

Multiplying by 2, 3, 4 & 8 page 2 of 2

4 Circle all the Double-Doubles facts (×4) in blue. Then go back and do them.

5 Circle all the Double-Double-Doubles facts (×8) in red. Then go back and do them.

8 × 3 = 24	4 × 9 = 36	10 × 4 = 40	5 × 8 = 40	2 × 4 = 8
0 × 4 = 0	8 × 1 = 8	7 × 8 = 56	3 × 4 = 12	10 × 8 = 80
4 × 5 = 20	6 × 4 = 24	8 × 8 = 64	7 × 4 = 28	6 × 8 = 48
9 × 8 = 72	8 × 4 = 32	4 × 4 = 16	8 × 3 = 24	2 × 8 = 16

6 Now solve the division problems below. Use the multiplication facts above to help.

24 ÷ 3 = 8	16 ÷ 4 = 4	32 ÷ 4 = 8	56 ÷ 7 = 8	24 ÷ 6 = 4
48 ÷ 6 = 8	40 ÷ 10 = 4	28 ÷ 7 = 4	16 ÷ 2 = 8	40 ÷ 5 = 8

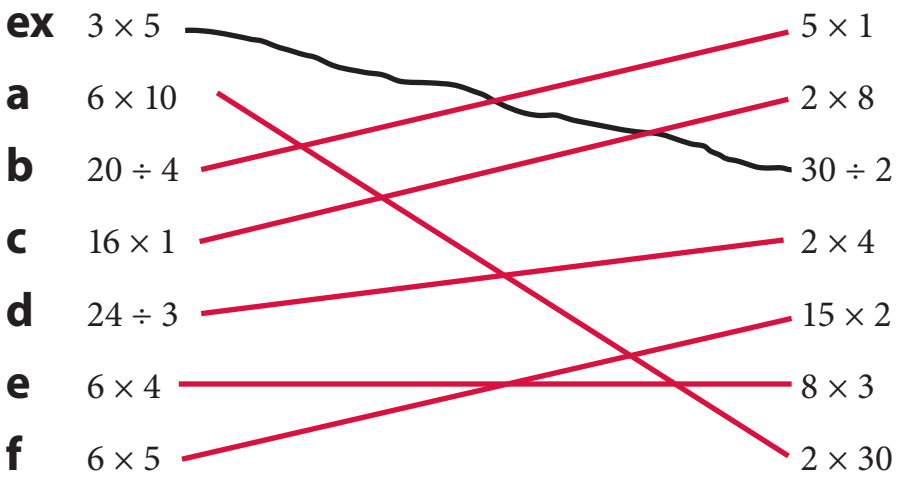
7 **CHALLENGE** Use what you know about the basic multiplication and division facts to solve the combinations below.

4 × 20 = 80	3 × 30 = 90	5 × 50 = 250	6 × 70 = 420	8 × 80 = 640
80 ÷ 2 = 40	60 ÷ 3 = 20	90 ÷ 3 = 30	120 ÷ 4 = 30	150 ÷ 5 = 30

NAME | DATE

More Number Puzzles page 1 of 2

1 Draw a line from each expression on the left to the equivalent expression on the right.



2 Write an equal (=), greater than (>), or less than (<) sign in the boxes to make each equation true.

ex 2×5 < 3×4

a $12 \div 4$ = 3×1 **b** 5×1 > $12 \div 3$ **c** 8×2 = 4×4

d $25 \div 5$ < 4×2 **e** 8×4 > 12×2 **f** $20 \div 2$ < 3×5

3 Dani says you can show the solution to $2 \times 5 \times 3$ with one equation:
$2 \times 5 = 10 \times 3 = 30$

Maya says you have to use two equations:
$2 \times 5 = 10$ *and* $10 \times 3 = 30$

a Which student is correct? Maya

b Explain your answer.

Student answers will vary. Example: *Maya is correct because all expressions are joined by an equal sign and must be equal, and $2 \times 5 \neq 10 \times 3$ and $2 \times 5 \neq 30$.*

(continued on next page)

NAME | DATE

More Number Puzzles page 2 of 2

4 Andy had 30 marbles. He gave half of his marbles to his 3 cousins. His 3 cousins divided the marbles equally.

Jan had 48 marbles. She gave half of her marbles to her 4 cousins. Her 4 cousins divided the marbles equally.

a Whose cousins got more marbles, Andy's cousins or Jan's cousins? Jan's

b Use labeled sketches, numbers, or words to prove your answer.

Work will vary. Example:

Andy
30 ÷ 2 = 15
15 ÷ 3= 5

Jan
48 ÷ 2 = 24
24 ÷ 4 = 6

5 Tim went to the pet store. He saw 3 cages of mice. There were 4 mice in each cage. He also saw 2 cages of hamsters. There were 6 hamsters in each cage. How many animals did Tim see in all?

a Circle the expression that best represents this problem.

$(3 \times 2) + (6 \times 4) = a$ $(3 \times 4) + (2 \times 6) = a$ $(4 \times 1) + (2 \times 3) = a$

b Then find the answer. Show your work.

24 animals; work will vary.

6 **CHALLENGE** Use the digits 0–9 each just one time. Write them in the boxes below. Make each multiplication problem correct.

0 1 2 3 4 5 6 7 8 9

6	2	5	3	9
× 6	× 9	× 4	× 4	× 8
36	18	20	12	72

NAME | DATE

More Division Practice page 1 of 2

1 Fill in the blanks.

a $4 \times$ 6 $= 24$ $24 \div 4 =$ 6

b $36 \div 9 =$ 4 $9 \times$ 4 $= 36$

c 7 $\times 5 = 35$ $35 \div$ 7 $= 5$

d $21 \div$ 3 $= 7$ 3 $\times 7 = 21$

e $4 \times 3 =$ 12 12 $\div 4 = 3$

f 54 $= 9 \times 6$ 54 $\div 9 = 6$

g $403 + 296 =$ 699

h $403 - 296 =$ 107

2 Solve the story problems below. Show your thinking in words, numbers, or sketches for each one. Be sure to label your answers with the correct units.

a Mr. Bee bought 3 jars of honey, which weighed a total of 24 ounces. If all the jars weighed the same amount, how much did each jar weigh?

Work will vary.

Each jar weighed 8 ounces.

b Mrs. Bee also bought 24 ounces of honey. She put 3 ounces of honey into several small jars. How many jars did she use?

Work will vary.

Mrs. Bee used 8 jars.

3 Compare problems 2a and 2b. How are they alike? How are they different?

Work will vary. Examples:

- *The first problem is about weight and the second is about how many jars.*
- *They are both division problems.*

(continued on next page)

NAME | DATE

More Division Practice page 2 of 2

4 Mrs. Moth picked 8 flowers. Each flower had 6 petals.

a How many petals are on the flowers that Mrs. Moth picked? Show your work.

48 petals; work will vary.

b Write an equation that describes problem 4a. **$8 \times 6 = 48$**

5 **CHALLENGE** Later, Mrs. Moth picked 24 more flowers. Six of them each had 9 petals, 7 of them each had 8 petals, 5 of them each had 3 petals, and the rest each had 10 petals.

a How many flowers had 10 petals? Show your work.

6 flowers had 10 petals; work will vary.

b How many petals were on all 24 of the flowers that Mrs. Moth picked? Show your work.

185 petals; work will vary.

NAME | DATE

Division & Fraction Review page 1 of 2

1 Complete the division facts. They may help you with the next problem.

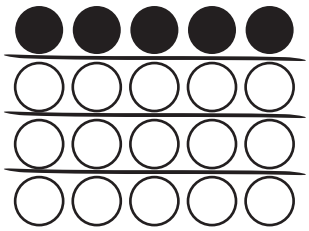
20 ÷ 4 = 5 18 ÷ 3 = 6 15 ÷ 3 = 5

16 ÷ 4 = 4 16 ÷ 2 = 8 20 ÷ 5 = 4

2 Divide each set into equal groups. Shade in some circles as directed.

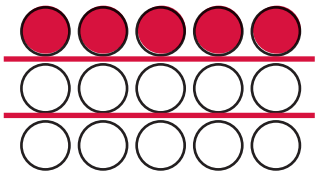
Work will vary. Examples shown.

ex Shade in $\frac{1}{4}$ of the circles.



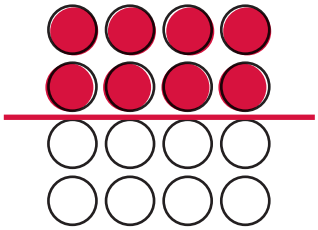
a Shade in $\frac{1}{3}$ of the circles.

Hint: Divide the set into 3 equal groups first.



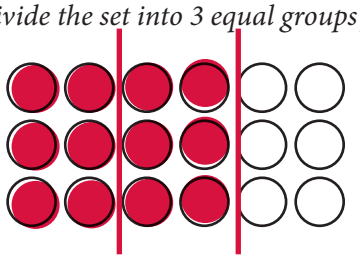
b Shade in $\frac{1}{2}$ of the circles.

Hint: Divide the set into 2 equal groups first.



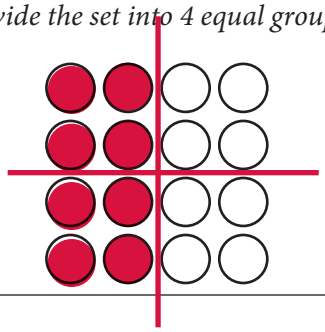
c Shade in $\frac{2}{3}$ of the circles.

Hint: Divide the set into 3 equal groups first.



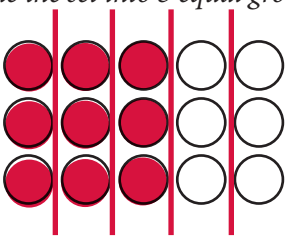
d Shade in $\frac{2}{4}$ of the circles.

Hint: Divide the set into 4 equal groups first.



e **CHALLENGE** Shade in $\frac{3}{5}$ of the circles.

Hint: Divide the set into 5 equal groups first.



3 **a** Find two fractions above that are equal. Write them here: 1/2 = 2/4

b How do you know these fractions are equal?

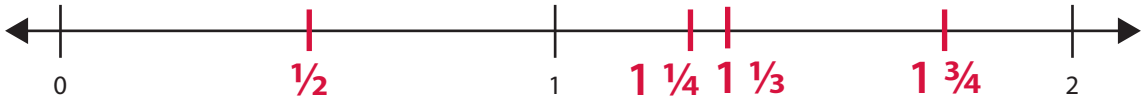
Work will vary. Example:
They are both equal to 8 out of 16 circles.

(continued on next page)

NAME | DATE

Division & Fraction Review page 2 of 2

4 Mark and label each of these fractions on the number line: $\frac{1}{2}$, $1\frac{1}{4}$, $1\frac{1}{3}$, $1\frac{3}{4}$.



5 David, Mary, Claire, and Mark were picking strawberries in their grandparents' garden. They had each picked the same number of strawberries when their grandma gave everyone 2 more strawberries. Now the 4 kids had 36 strawberries in all.

a How many strawberries did each child have before Grandma gave them more? Show your work.

7 strawberries; work will vary.

b Mark the ***two*** equations below that could help you solve the problem.

- ● $(s + 2) \times 4 = 36$
- ○ $2 \times 4 + s = 36$
- ○ $36 - (2 \times 4) = s$
- ● $(36 \div 4) - 2 = s$

6 **CHALLENGE** The next day the kids picked 124 strawberries in all. They gave $\frac{1}{4}$ of the strawberries to their neighbor, and their mother used $\frac{2}{4}$ of the strawberries in a pie. The rest of the strawberries were saved for snacks.

a How many strawberries went into the pie? Show your work.

62 strawberries; work will vary.

b How many strawberries did the family have for snacking on? Show your work.

31 strawberries; work will vary.

NAME | DATE

Unit 5 Review page 1 of 2

1 Complete the multiplication facts.

7 × 2 = 14	6 × 3 = 18	8 × 3 = 24	4 × 4 = 16	7 × 10 = 70	9 × 5 = 45	3 × 9 = 27
5 × 6 = 30	8 × 6 = 48	7 × 0 = 0	4 × 7 = 28	7 × 8 = 56	4 × 9 = 36	8 × 9 = 72

2 Solve the division facts. (Hint: Use the multiplication facts above to help.)

16 ÷ 4 = 4 28 ÷ 4 = 7 45 ÷ 5 = 9 30 ÷ 5 = 6

18 ÷ 3 = 6 24 ÷ 3 = 8 14 ÷ 2 = 7 70 ÷ 10 = 7

3 Fill in the missing number in each fact. Then write a related division equation.

ex	4 × 5 = 20	20 ÷ 5 = 4
a	7 × 3 = 21	21 ÷ 3 = 7
b	5 × 5 = 25	25 ÷ 5 = 5
c	2 × 7 = 14	14 ÷ 7 = 2

4 Write the answer to each equation below, and then write a story problem to match.

6 × 4 = 24	30 ÷ 3 = 10
Responses will vary.	

(continued on next page)

NAME | DATE

Unit 5 Review page 2 of 2

5 Solve each of the story problems below. Use another piece of paper if you need more room. Use numbers, labeled sketches, or words to show your thinking. Then write an equation to represent the problem and the answer.

a The pet store just got 32 new turtles. Elena is putting the turtles into terrariums. She puts 4 turtles in each terrarium. How many terrariums does she use?

8 terrariums; work will vary.

My equation: **32 ÷ 4 = 8**

b The pet store has 9 puppies. Each puppy drinks 6 cups of water every day. How much water do all 9 of the puppies drink in one day?

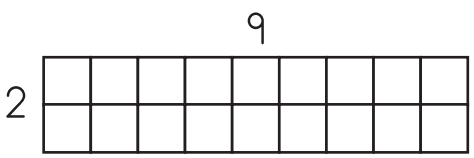
54 cups; work will vary.

My equation: **9 × 6 = 54**

6 The rectangles below have already been marked off in square units. Record the dimensions of each and then find the area. Write two equations to show how you found the area of each.

Work will vary. Examples below.

ex

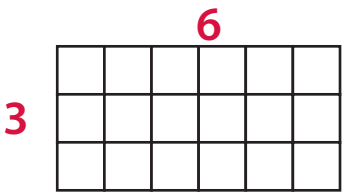


Area = 18 square units

Equations:

9 + 9 = 18 2 × 9 = 18

a



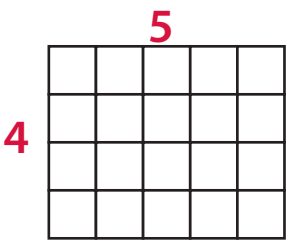
Area = **18** square units

Equations:

3 × 6 = 18

6 + 6 + 6 = 18

b



Area = **20** square units

Equations:

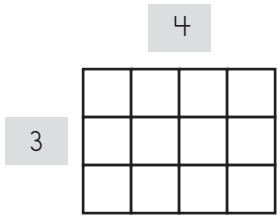
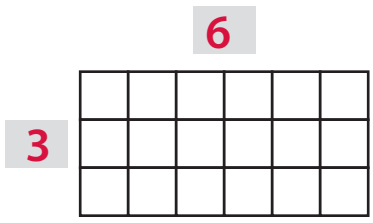
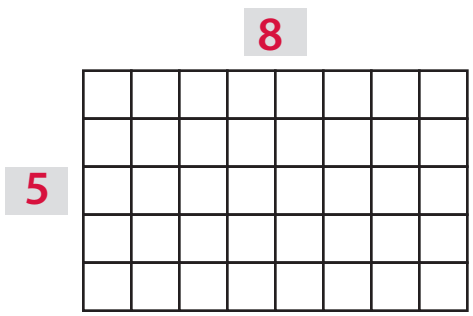
4 × 5 = 20

5 + 5 + 5 + 5 = 20

NAME | DATE

Playing with Area page 1 of 2

1 Label the dimensions and area of each rectangle. Write two (or more) different equations to show how someone could find the area. **Student work may vary.**

ex  Area = 12 square units	Equations: 3 + 3 + 3 + 3 = 12 4 + 4 + 4 = 12 3 × 4 = 12 (3 × 2) + (3 × 2) = 12
a  Area = 18 square units	Equations: **Examples:** 3 × 6 = 18 6 + 6 + 6 = 18
b  Area = 40 square units	Equations: **Examples:** 5 × 8 = 40 10 + 10 + 10 + 10 = 40

2 Fill in the missing number in each fact. Then write a related division equation.

Division problems may vary. Examples shown

ex	3 × 6 = 18	18 ÷ 3 = 6
a	8 × 6 = 48	48 ÷ 6 = 8
b	3 × 8 = 24	24 ÷ 8 = 3
c	4 × 7 = 28	28 ÷ 7 = 4
d	5 × 9 = 45	45 ÷ 9 = 5
e	9 × 10 = 90	90 ÷ 10 = 9
f	8 × 4 = 32	32 ÷ 4 = 8

(continued on next page)

NAME | DATE

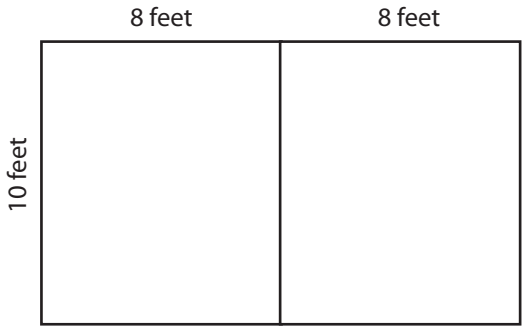
Playing with Area page 2 of 2

3 Frank bought a rug for his room. It is 5 feet by 3 feet. What is the total area of the rug in square feet? Use labeled sketches, numbers, or words to solve this problem. Show all your work.

Work will vary.

Area = 15 square feet

4 The tumbling mats in the gym are each 10 feet by 8 feet. Miranda pushed 2 of the mats together so she would have enough room to do her routines. Use the sketch below to help find the total area of the 2 mats in square feet. Show your work.



Work will vary.

Area = 160 square feet

5 **CHALLENGE** Andrea got some free carpet squares at a carpet store. Each carpet square has an area of 1 square foot. She got enough blue squares to cover a space on her bedroom floor that is 2 feet by 8 feet. She got enough red squares to cover another space on her bedroom floor that is 5 feet by 8 feet.

a How many total square feet can be covered if Andrea puts these carpet squares together? Show your work. Use another piece of paper if you need more room.

Work will vary.

Area = 56 square feet

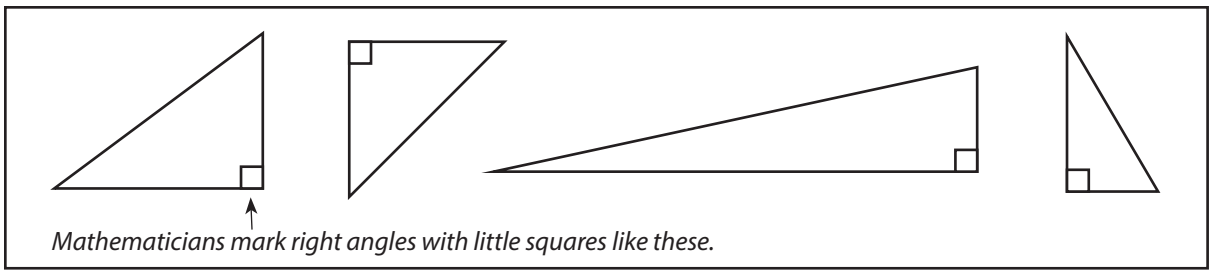
b There are two equations below you could use to help solve this problem. Mark both of them.

- ○ $(2 + 8) \times (5 + 8) = a$
- ○ $(2 + 5) + 8 = a$
- ● $(2 \times 8) + (5 \times 8) = a$
- ● $(2 + 5) \times 8 = a$

NAME | DATE

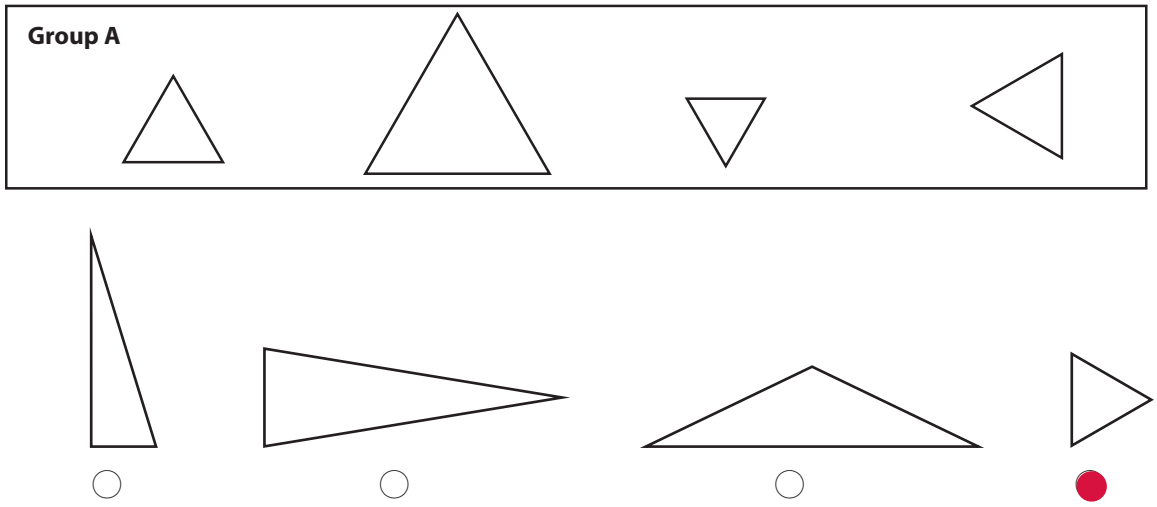
Triangles & Two-Digit Addition Review page 1 of 2

1 What is the same about all of these triangles?



All the triangles **have one right angle.**

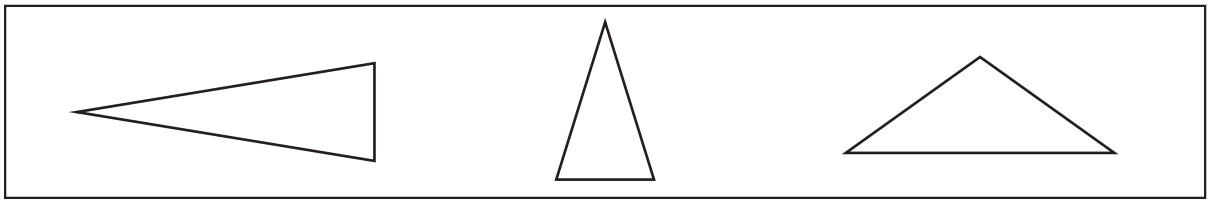
2 a All of the triangles in group A have something in common. Fill in the circle next to the triangle that belongs with them.



b How do you know the triangle you picked belongs in group A?

Explanations will vary. Example:
It has three equal sides.

3 What do these three triangles have in common?



All of the triangles **have two equal sides.**

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NAME | DATE

Triangles & Two-Digit Addition Review page 2 of 2

4 Add each pair of numbers. Show all your work.

60 + 35 = 95 27 + 61 = 88 36 + 45 = 81

Work will vary.

53 + 64 = 117	48 + 93 = 141	42 + 68 = 110	79 + 78 = 157	98 + 19 = 117

Work will vary.

65 + 97 = 162	58 + 72 = 130	21 + 99 = 120	95 + 83 = 178	67 + 92 = 159

Work will vary.

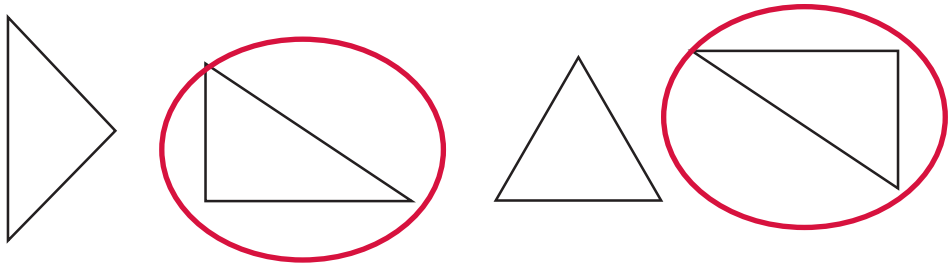
5 **CHALLENGE** Fill in the missing digits.

38 + 65 = 103	84 + 59 = 143	29 + 77 = 106	87 + 48 = 135

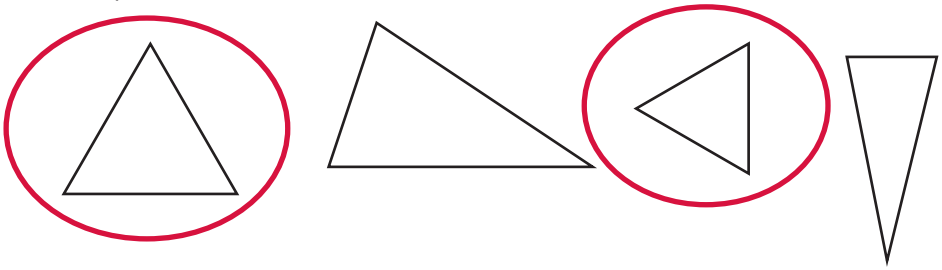
NAME | DATE

Triangles page 1 of 2

1 Circle the two triangles that are congruent. *Congruent* means exactly the same shape and size.



2 Circle the two triangles that are similar. *Similar* means exactly the same shape, but not necessarily the same size.



3 Add.

229	448	124	180	229	99	199
+ 71	+ 326	+ 255	+ 352	+ 71	+ 216	+ 699
300	**774**	**379**	**532**	**300**	**315**	**898**

4 Subtract.

162	148	97	108	203	261	448
– 31	– 23	– 65	– 28	– 87	– 15	– 150
131	**125**	**32**	**80**	**116**	**246**	**298**

5 Round each number to the nearest 10 and the nearest 100.

Number	Nearest 10	Nearest 100
342	**340**	**300**
689	**690**	**700**

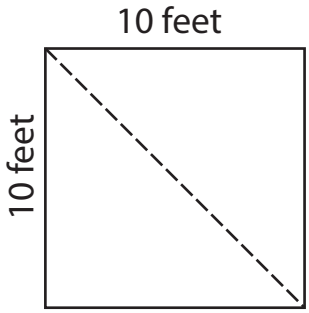
Number	Nearest 10	Nearest 100
837	**840**	**800**
906	**910**	**900**

(continued on next page)

NAME | DATE

Triangles page 2 of 2

6 Angie and Kara share a bedroom. They've been having trouble agreeing on who is doing her fair share of the cleaning. So they decided to lay a rope on the floor to divide the room in half. Each girl is responsible for keeping half the room clean and organized.



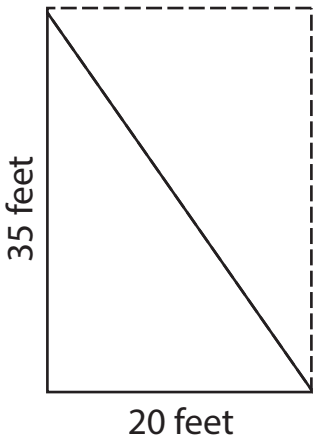
a The area of the whole room is 100 square feet. Show your work.

Work will vary.

b The area of each girl's part of the room is 50 square feet. Show your work.

Work will vary.

7 **CHALLENGE** Susie and her mother are planting a flower garden. It will be in the shape of a right triangle. They drew a diagram of the triangle and labeled the dimensions. How much area will the flower garden cover? Show your work.

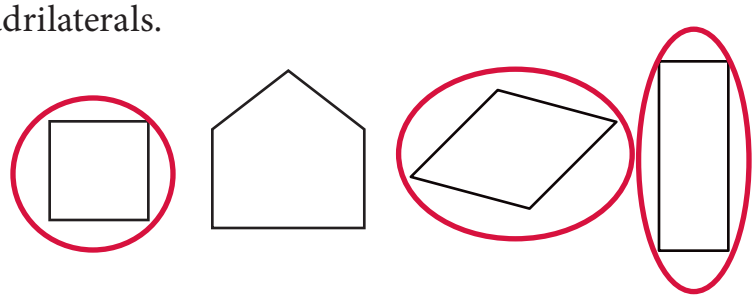


350 sq. ft.; work will vary.

NAME | DATE

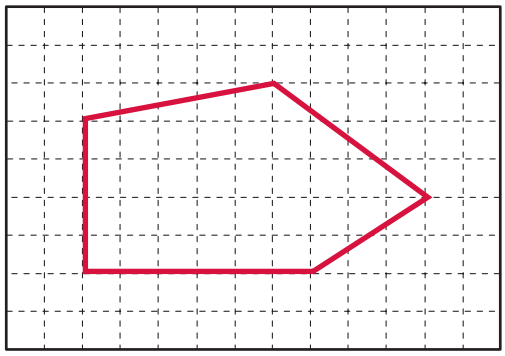
More Polygons & Time page 1 of 2

1 Circle the quadrilaterals.

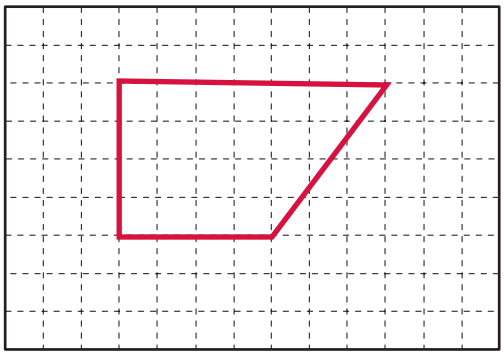


2 Draw the following polygons on the grids below. Use a ruler to help make your lines straight.

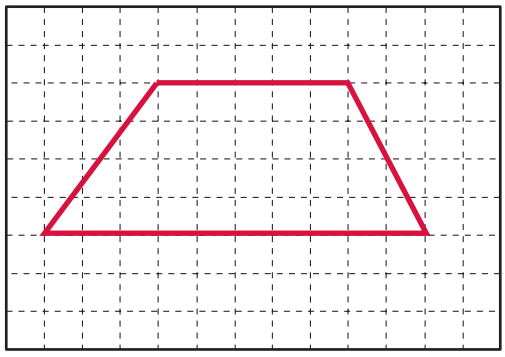
a A polygon with 5 sides and 1 right angle



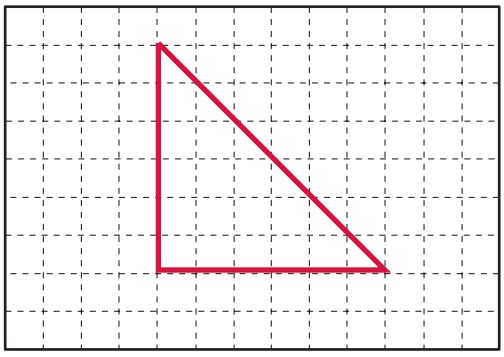
b A quadrilateral with exactly 1 pair of parallel sides



c A quadrilateral with 2 acute angles



d A polygon with 3 sides and 1 right angle



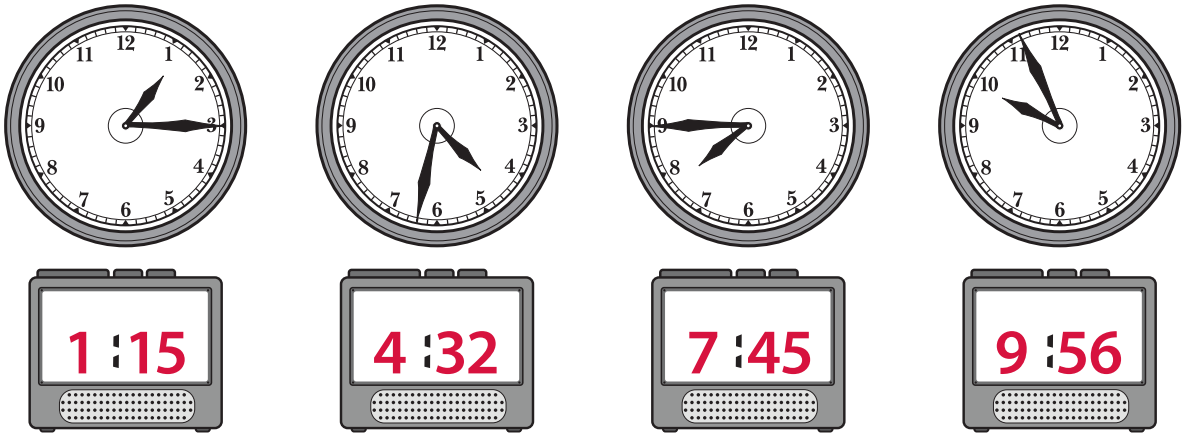
Work will vary. Examples shown above.

(continued on next page)

NAME | DATE

More Polygons & Time page 2 of 2

3 Write the time shown on each clock.



4 Brad likes to bake brownies. It takes him 15 minutes to mix up all the ingredients. Then the brownies need to bake for 25 minutes. After that they have to cool off for 7 minutes. How long does it take Brad to have brownies ready to eat? Show your work.

47 minutes; work will vary.

5 **CHALLENGE** Kevin is building a large model of a soccer ball out of foam board. A soccer ball is made of 20 hexagons and 12 pentagons. It takes Kevin 6 minutes to measure and cut each hexagon, and it takes him 5 minutes to measure and cut each pentagon.

a It will take Kevin **180** minutes to make all the pieces. Show all your work.

Work will vary.

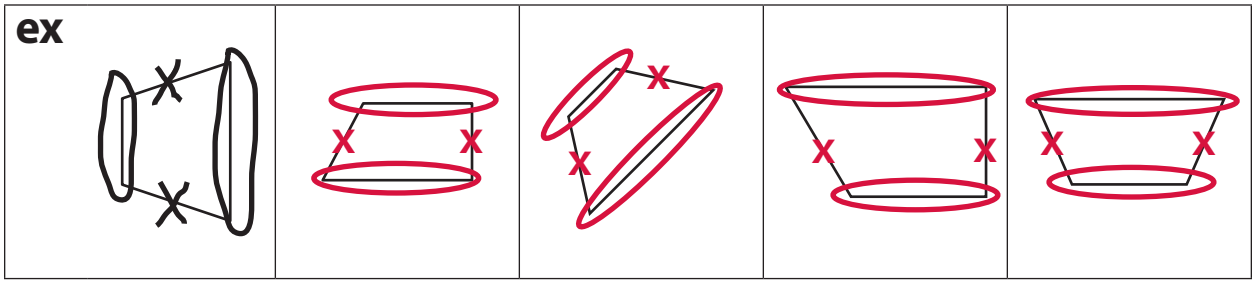
b It will take Kevin **3** hours to make all the pieces. Show all your work.

Work will vary.

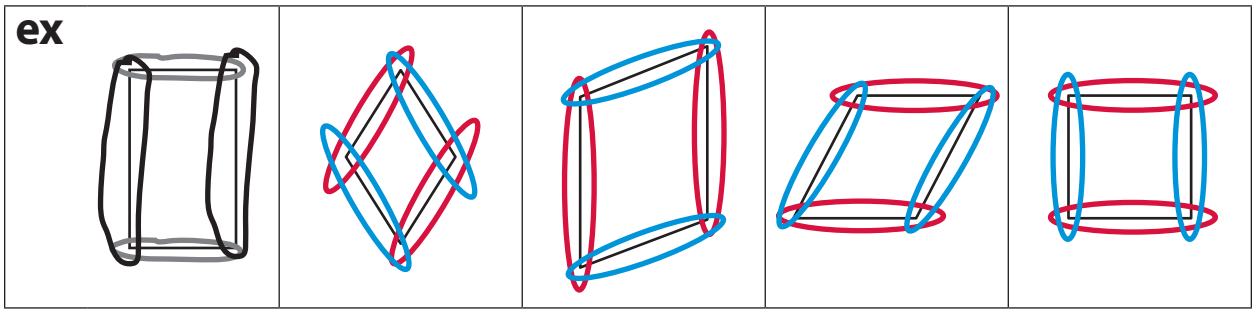
NAME | DATE

Sorting & Identifying Quadrilaterals page 1 of 2

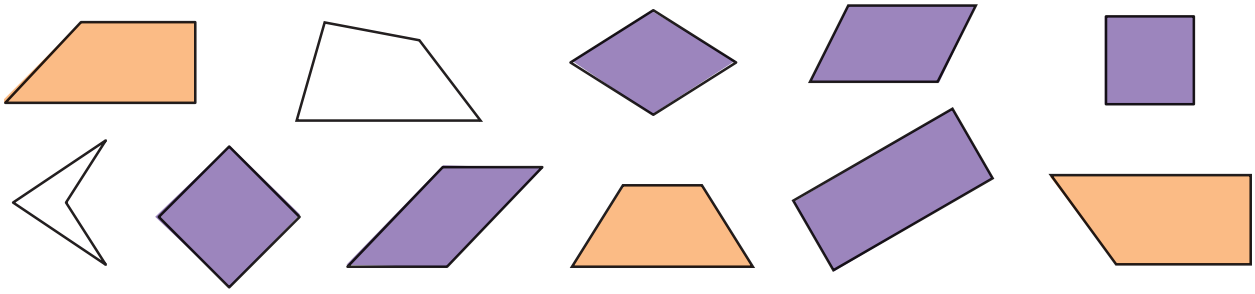
1 A trapezoid is a quadrilateral with exactly 1 pair of parallel sides. Circle the 2 sides that are parallel to each other on each of the trapezoids below. Mark the 2 sides that are not parallel to each other with an x on each of the trapezoids below.



2 A parallelogram is any quadrilateral with 2 pairs of parallel sides. On each of the parallelograms below, circle 1 pair of parallel sides in blue. Circle the other pair of parallel sides in red.



3 Find all the trapezoids below. Color them orange. Find all the parallelograms below. Color them purple. When you finish, you should have 2 quadrilaterals that are not colored.



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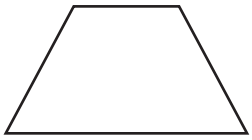
NAME | DATE

Sorting & Identifying Quadrilaterals page 2 of 2

4 a This shape is a



- ● trapezoid
- ○ square
- ○ parallelogram
- ○ rectangle

b How do you know that the shape is *not* a parallelogram? Use labeled sketches, numbers, or words to explain. .

Responses will vary. Example: *It can't be a parallelogram because it only has one pair of parallel sides, and a parallelogram has two pairs of parallel sides.*

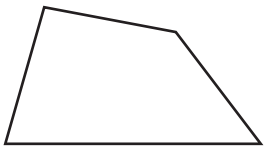
5 a This shape is a

- ○ trapezoid
- ○ square
- ● parallelogram
- ○ rectangle

b How do you know that the shape is *not* a rectangle? Use labeled sketches, numbers, or words to explain.

Responses will vary. Example: *A rectangle has four right angles, and this shape has zero right angles.*

6 a This shape is a



- ○ trapezoid
- ○ square
- ● quadrilateral
- ○ rectangle

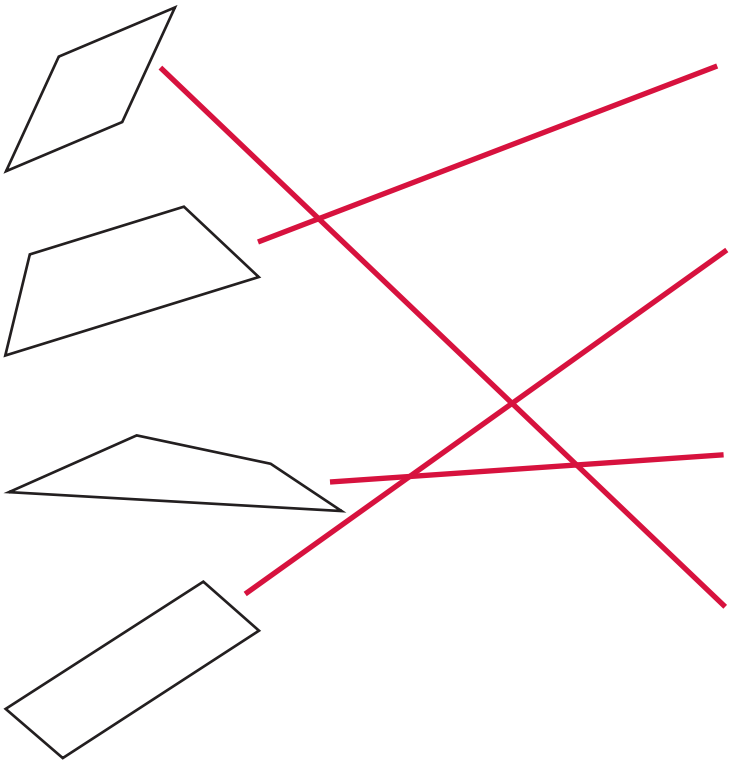
b How do you know that the shape is *not* a trapezoid? Use labeled sketches, numbers, or words to explain.

Responses will vary. Example: *A trapezoid has one pair of parallel sides, but this shape has no parallel sides.*

NAME | DATE

Quadrilateral Matchup page 1 of 2

1 Draw a line connecting each quadrilateral with its description.



Trapezoid
a quadrilateral with exactly 1 pair of parallel sides

Parallelogram
a quadrilateral with 2 pairs of parallel sides opposite each other

Quadrilateral
any polygon with 4 sides

Rhombus
a parallelogram with 4 congruent sides

2 Solve the following:

6 × 3 = 18	8 × 6 = 48	9 × 7 = 63	20 × 3 = 60	7 × 7 = 49	20 × 8 = 160	5 × 7 = 35
30 × 2 = 60	6 × 9 = 54	9 × 4 = 36	5 × 5 = 25	8 × 8 = 64	8 × 4 = 32	3 × 7 = 21

(continued on next page)

NAME | DATE

Quadrilateral Matchup page 2 of 2

3 Oranges cost 25 cents for $\frac{1}{2}$ kilogram. How much would 8 kilograms of oranges cost?

$4.00 or 400¢

4 **CHALLENGE** Julia wants to bring watermelon for the third grade picnic. Seedless watermelon costs 39 cents for $\frac{1}{2}$ kilogram. One serving of watermelon weighs about 150 grams. There will be 60 people at the picnic.

a How many kilograms of watermelon will Julia need to buy? (Remember, there are 1,000 grams in one kilogram.)

9kg; work will vary. Example:

servings	mass
1	150 g
2	300 g
20	3,000 g (3 kg)
60	9,000 g (9 kg)

b How much will that watermelon cost?

$7.02; work will vary. Example:

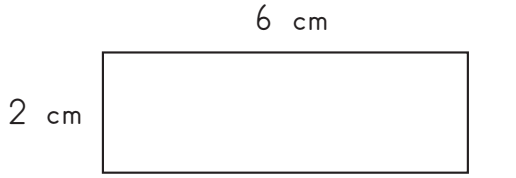
mass	cost
½ kg	$0.39
1 kg	$0.78
10 kg	$7.80
9 kg	$7.02

NAME | DATE

Perimeter Problems page 1 of 2

1 For the quadrilaterals below, measure in centimeters and label as many sides as you need to find the perimeter. Then write an equation to show the perimeter of the quadrilateral, and fill in the answer at the bottom of the box.

ex

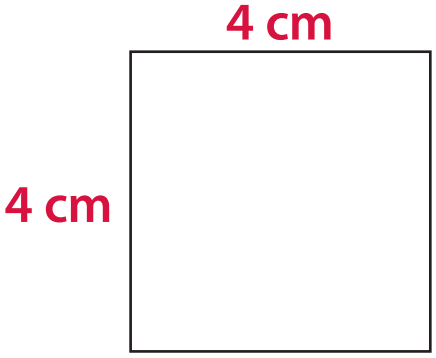


(2 × 6) + (2 × 2) = 12 + 4

12 + 4 = 16 cm

Perimeter = 16 cm

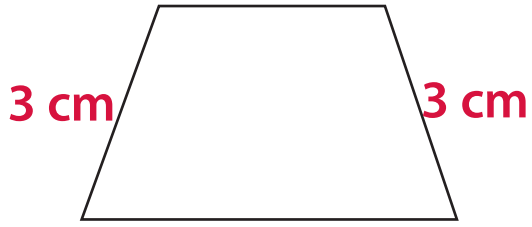
a



4 + 4 + 4 + 4 = 16

Perimeter = 16 cm

b



5 cm

3 + 3 + 3 + 5 = 14

Perimeter = 14 cm

c

2 + 5 + 2 + 5 = 14

Perimeter = 14 cm

2 Sarah says you only need to measure one side of a square to figure out its perimeter. Do you agree with Sarah? Why or why not? Use labeled sketches, numbers, or words to explain your answer.

Responses will vary. Example: Agree.
If you know for a fact it is a square, you can measure only one side, because all sides of a square are the same length.

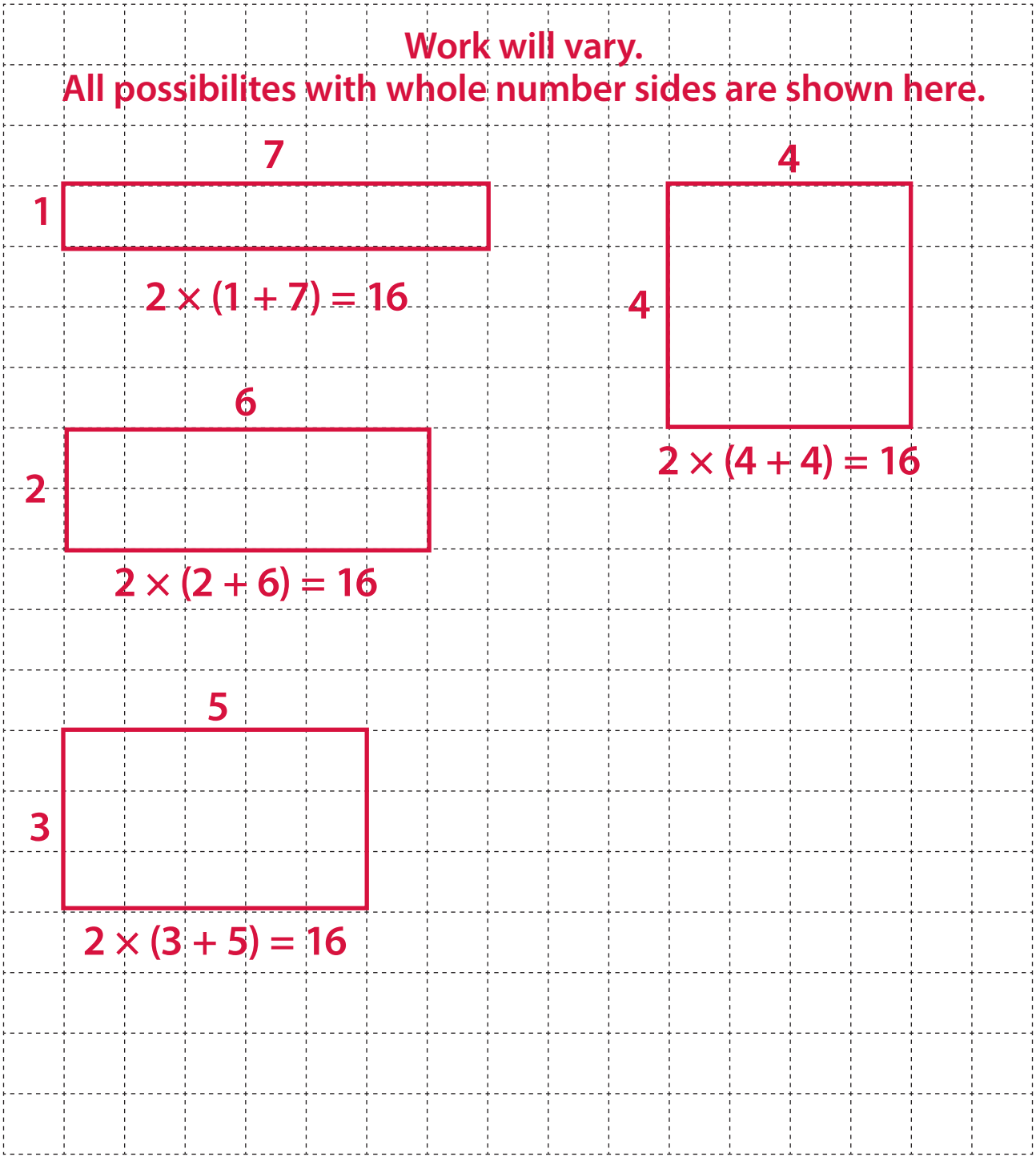
(continued on next page)

NAME | DATE

Perimeter Problems page 2 of 2

3 Jacob and his dad are going to make a rabbit pen in the backyard. They have 16 feet of fencing. Help Jacob draw some plans. Sketch and label at least 4 different rectangles with a perimeter of 16 centimeters on the centimeter grid paper below. Write an equation under each sketch to show that the perimeter is actually 16 centimeters. Put a star beside the sketch you think would be best for a rabbit pen.

Work will vary.
All possibilites with whole number sides are shown here.



NAME | DATE

Sandbox & Garden Problems page 1 of 2

1 a Mrs. Smith made a sandbox for her kindergarten students. It is 60 inches wide and 125 inches long. Make a labeled sketch of the sandbox below.

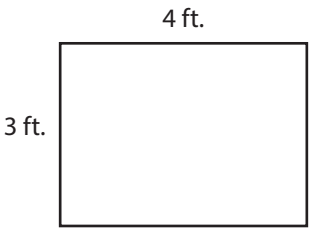
125 in.

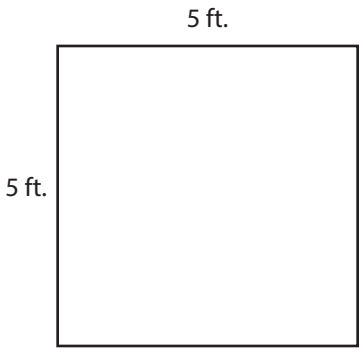
60 in.

b What is the perimeter of the sandbox? Use your sketch to help solve the problem.

The perimeter of the sandbox is 370 inches.

2 Mai and her sister Keiko were planting a garden. They made two beds to plant flowers. One was 4 feet by 3 feet. The other was 5 feet by 5 feet. They want to outline the beds with bricks that are each 1 foot long. How many bricks will they need to outline both beds? Show all of your work.





Work will vary.

They will need 34 bricks to outline both beds.

(continued on next page)

NAME | DATE

Sandbox & Garden Problems page 2 of 2

3 DJ Jumpy Frog, who lives in the sisters' garden, says you can also use the number line to show and solve division problems. He says to solve 14 ÷ 2, you start at 14. Then you take equal hops of 2 all the way back to 0. If you count the number of hops, you get the answer.

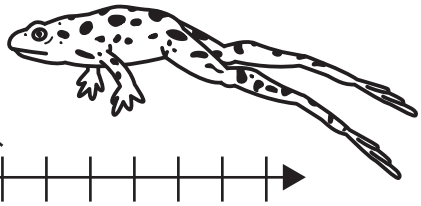
a How many hops did it take DJ to get back to 0? 7

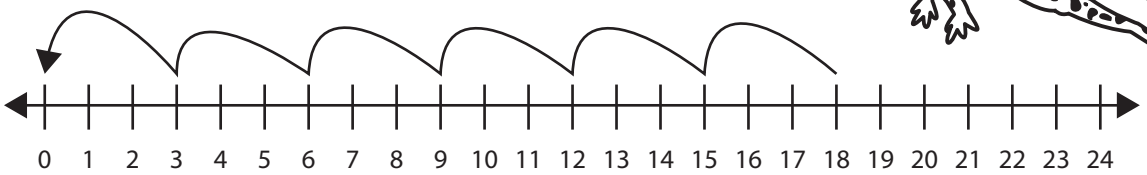
b Did he get the right answer to 14 ÷ 2? yes

c Why did he take hops of 2 instead of 3?

Responses will vary. Example:
Because he is dividing by 2, not 3.

4 Here is another number line picture from DJ.



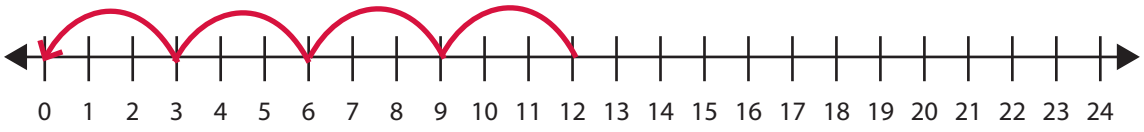


Write a division equation to go with DJ's picture.

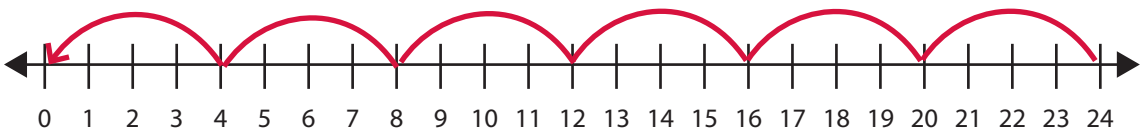
18 ÷ 3 = 6

5 Use the number lines below to show and solve division problems a and b.

a 12 ÷ 3 = 4



b 24 ÷ 4 = 6

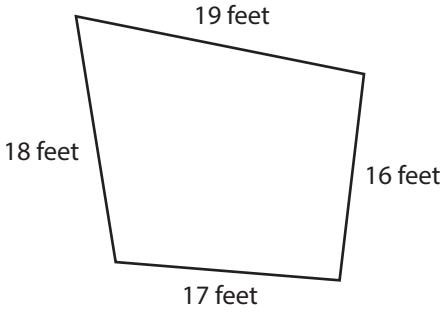


NAME | DATE

Area & Perimeter Puzzles page 1 of 2

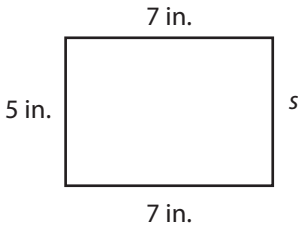
Show your work for each of the problems below, and label your answers with the correct units.

1 Find the perimeter of this quadrilateral. Work will vary.



Perimeter = 70 feet

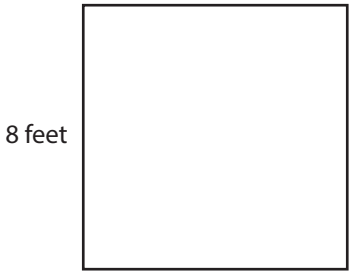
2 The perimeter of this rectangle is 24 inches. Use that information to find the length of the side marked *s* and the area of the rectangle.



Side s = 5 inches

Area = 35 sq. in.

3 The sandbox at the park is perfectly square. Use the information in the picture below to find the perimeter and the area of the sandbox.



Perimeter = 32 feet

Area = 64 sq. ft.

(continued on next page)

NAME | DATE

Area & Perimeter Puzzles page 2 of 2

4 Jake and his mom run laps around the soccer field in their neighborhood. The field is 100 yards by 60 yards, and they run 4 laps around the field each time. When they went to visit Jake's uncle, they did laps around the kids' soccer field in his neighborhood. The field was 30 yards by 55 yards, and they ran 8 laps around it. Did they run more at Jake's uncle's house or in their own neighborhood? Exactly how much more? Show all your work.

They ran 80 more yards at Jake's uncle's house. Work will vary.

5 **CHALLENGE** A rectangle has a perimeter of 36 feet. It is twice as long as it is wide. What are the dimensions of the rectangle? Show all your work.

It's 6 feet wide and 12 feet long. Work will vary. Example:

$l + w = 18$

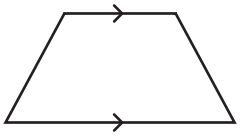
w	l
2	16
3	15
4	14
5	13
6	12

NAME | DATE

Unit 6 Review page 1 of 2

A *quadrilateral* is a shape with 4 sides. Here are some different kinds of quadrilaterals.

Trapezoid: a quadrilateral with exactly 1 pair of parallel sides

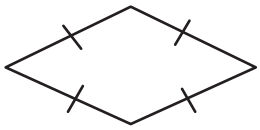


Mathematicians use little arrows like these to show that two sides are parallel.

Rectangle: a quadrilateral with 2 pairs of parallel sides and 4 right angles

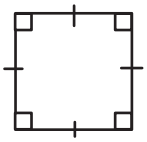
Mathematicians mark right angles with little squares like these.

Rhombus: a quadrilateral with 4 sides that are all the same length

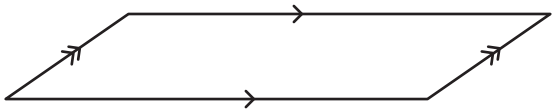


When the sides of a shape are marked with little tic-marks like these, it tells you that the sides are equal.

Square: a quadrilateral with 4 right angles and 4 sides that are all the same length



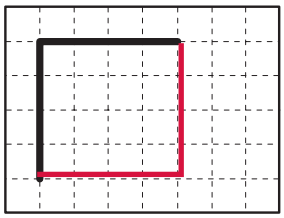
Parallelogram: a quadrilateral with 2 pairs of parallel sides



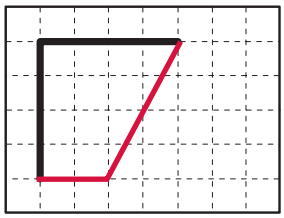
When a shape has more than one pair of parallel sides, mathematicians use more arrow heads to show which pairs of sides are parallel.

1 Draw in the missing sides to complete each quadrilateral.

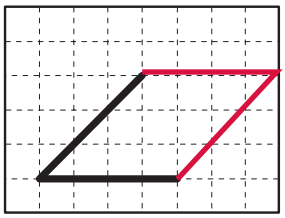
a square



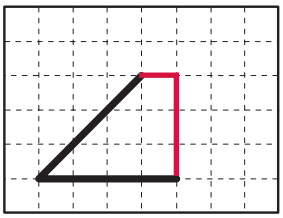
b trapezoid *



c parallelogram

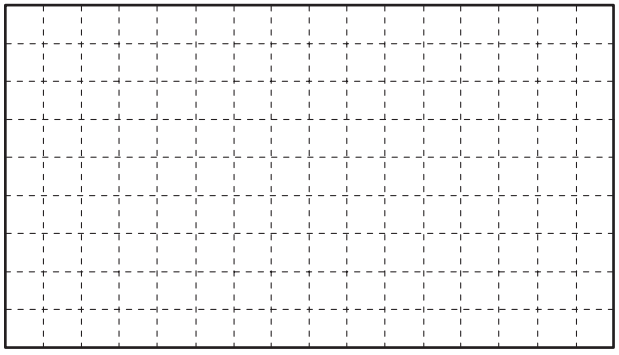


d trapezoid *



*** Work will vary. Examples above.**

2 Mayra says that squares and rectangles are parallelograms too, but rhombuses are not. Is she correct? Explain your answer. Use the grid if you want to.



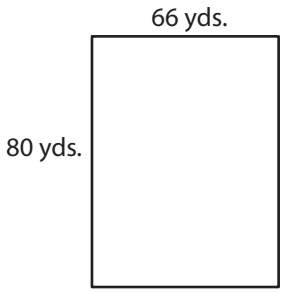
She is incorrect. Student explanations will vary, Example: Rhombuses always have two pairs of parallel sides, so they are parallelograms.

(continued on next page)

NAME | DATE

Unit 6 Review page 2 of 2

3 a When Danny has lots of extra energy, his mom tells him to do laps around the block. His block is 66 yards wide and 80 yards long. How many yards are in one lap around Danny's block? Show all your work.

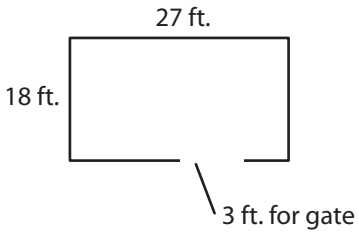


292 yards; work will vary.

b **CHALLENGE** There are 1,760 yards in a mile. How many full laps would Danny have to run around the block to run a mile? Show all your work.

7 laps; work will vary.

4 Danny and his mom are building a fenced region for their dog in the backyard. The region measures 18 ft. by 27 ft. The gate they plan to put in is 3 feet wide. How many feet of fencing will they need? Show all your work.



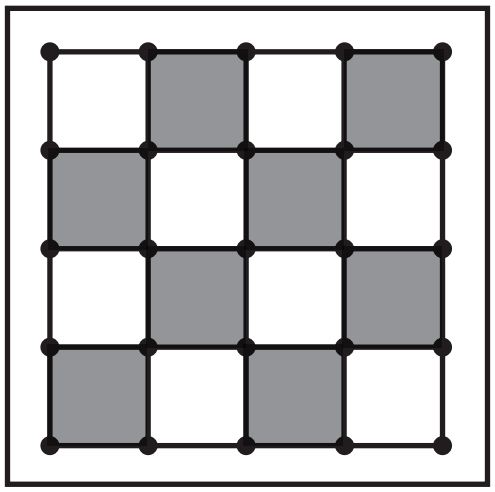
87 feet; work will vary.

NAME | DATE

Patchwork Fractions & Story Problems page 1 of 2

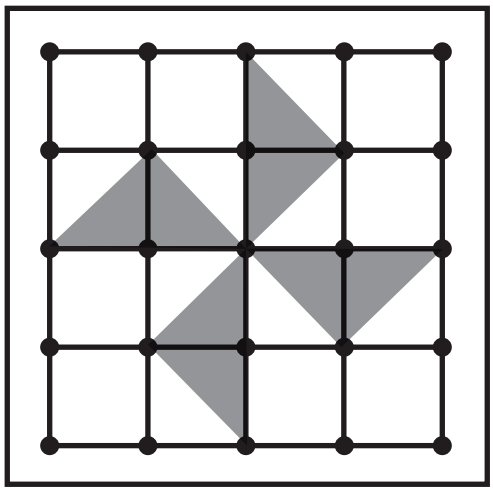
1 Mark all the fractions that describe the shaded part of each geoboard patchwork quilt block, if the geoboard is 1 square unit.

a



$\frac{2}{8}$ ● $\frac{1}{2}$ ● $\frac{2}{4}$ ● $\frac{4}{8}$

b



● $\frac{2}{8}$ $\frac{1}{2}$ ● $\frac{1}{4}$ ● $\frac{4}{16}$

2 Choose two fractions that you marked in part a above, and explain why they are equivalent.

Responses will vary.

3 Fill in the bubble next to the equation that will help you solve each word problem. Then solve the problem. Show all your work.

a Kara built a pen for her rabbit. It is 3 feet by 6 feet. What is the area of the pen?

○ $3 + 6 = a$ ● $3 \times 6 = a$ ○ $6 - 3 = a$ ○ $6 \div 3 = a$

The rabbit's pen has an area of **18** square feet.

b Steve's dog buried 27 bones. That's 3 times as many bones as David's dog buried. How many bones did David's dog bury?

○ $3 + 27 = b$ ○ $3 \times 27 = b$ ● $27 \div 3 = b$ ○ $27 - 3 = b$

David's dog buried **9** bones.

(continued on next page)

NAME | DATE

Patchwork Fractions & Story Problems page 2 of 2

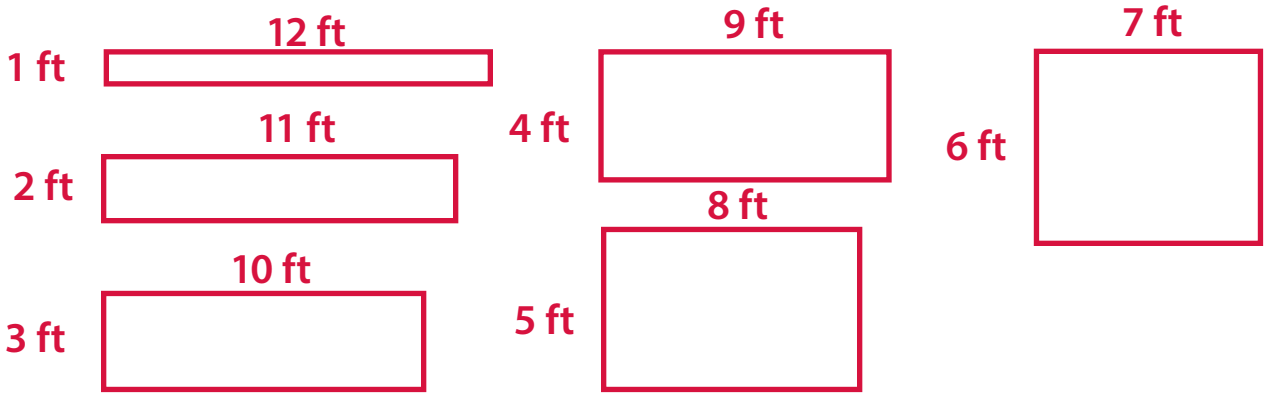
4 Lee wanted to put a fence around his vegetable garden. His brother asked him to put a fence around his garden, too. Lee's garden was 5 feet wide and 10 feet long. His brother's garden was 6 feet wide and 7 feet long. How many feet of fencing will Lee need? Show all your work.

56 feet; work will vary.

5 **CHALLENGE** After Lee fenced in the two gardens, his neighbor gave him another 26 feet of fencing. Lee and his brother decided to make a rectangle-shaped garden for their little sister.

a Draw and label 4 different ways 26 feet of fencing could be used to outline a rectangle.

Responses will vary. All possibilites with whole number sides are shown below.



b Circle the rectangle that you think would make the best garden and explain why.

Responses will vary.

NAME | DATE

Operations & Equations page 1 of 2

1 Solve the addition and subtraction problems.

427 + 92 = **519**	728 + 436 = **1,164**	246 + 795 = **1,041**	500 – 150 = **350**	280 – 145 = **135**
285 – 143 = **142**	964 – 528 = **436**	835 – 297 = **538**	603 – 465 = **138**	460 – 235 = **225**

2 Write a greater than, less than, or equal sign to complete each equation.

36 + 4 **<** 26 + 20

5 × 8 **>** 10 × 3

12 + 18 **=** 2 + 28

25 – 10 **=** 35 – 20

2 × 12 **>** 2 × 8

1 × 9 **<** 3 × 4

CHALLENGE

890 – 500 **>** 756 – 540

400 **=** 150 + 250

2 × 96 **<** 4 × 50

1 × 450 **=** 500 – 50

3 Pick the equation that will help you solve the problem. Then solve the problem. Jake found 32 shells on the beach. He gave half of them to his brother. Then his sister gave Jake 18 more shells. How many shells does Jake have now?

○ (32 × 2) + 18 = ? ○ (32 × 2) – 18 = ? ● (32 ÷ 2) + 18 = ?

Work will vary.

Jake has **34** shells.

(continued on next page)

NAME | DATE

Operations & Equations page 2 of 2

4 Pick the equation that will help you solve the problem. Then solve the problem and show your work.

a The pet store got 53 fish. They sold 29 of the fish right away. They divided the rest of the fish evenly into 3 tanks. How many fish were in each tank? (The letter *f* in the equations below stands for fish.)

- ○ $53 - 29 = f$
- ● $(53 - 29) \div 3 = f$
- ○ $(53 + 29) \div 3 = f$
- ○ $53 + 29 \times 3 = f$

Work will vary.

There were **8** fish in each tank.

b **CHALLENGE** You can get Fantastic Fish Food at the pet store in two different sizes. The smaller size is 60 grams. The larger size is 3 times that much, plus another 11 grams. How many grams is the larger size? (The letter *g* in the equations below stands for grams.)

- ○ $(60 + 3) + 11 = g$
- ○ $(60 \times 3) - 11 = g$
- ● $(60 \times 3) + 11 = g$
- ○ $(60 \div 3) \times 11 = g$

Work will vary.

The larger size is **191** grams.

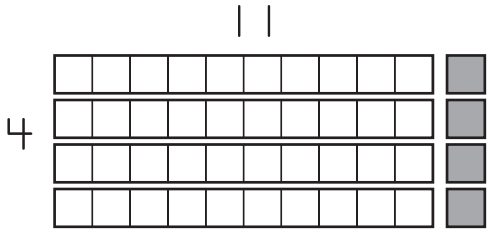
NAME | DATE

Multiplying by Elevens & Twelves page 1 of 3

1 Sam and Terra built some multiplication arrays with base ten area pieces. For each of their arrays:

- Label the dimensions.
- Write two different equations to show how many units there are.

ex

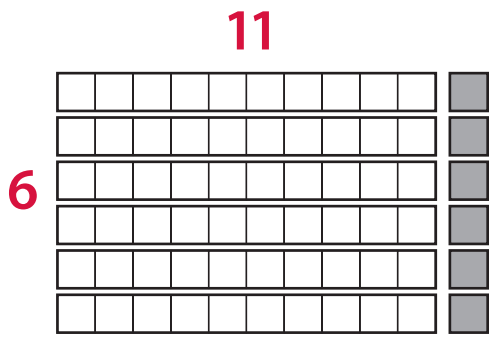


Equations:

11 + 11 + 11 + 11 = 44

4 × 11 = 44

a



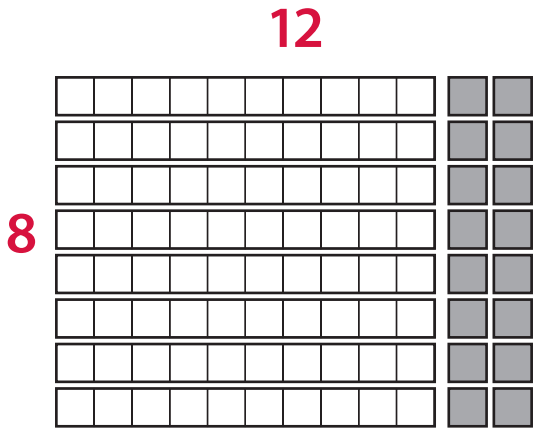
Equations:

6 × 11 = 66

60 + 6 = 66

(11 × 3) + (11 × 3) = 66

b



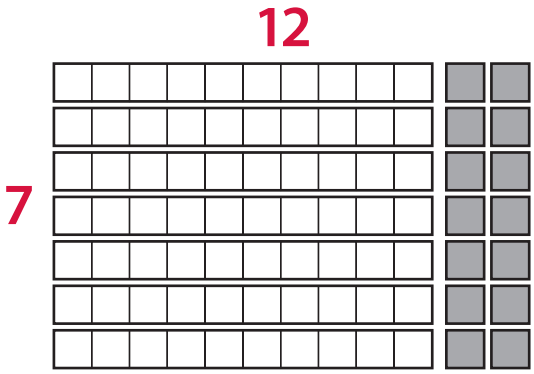
Equations:

8 × 12 = 96

(8 × 10) + (8 × 2) = 96

48 + 48 = 96

c



Equations:

7 × 12 = 84

(7 × 10) + (7 × 2) = 84

70 + 14 = 84

(continued on next page)

Student equations will vary. Examples shown above.

NAME | DATE

Multiplying by Elevens & Twelves page 2 of 3

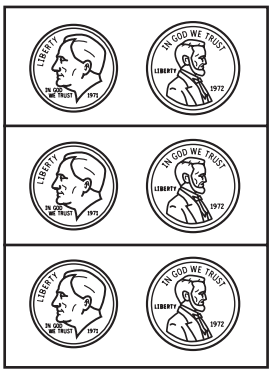
2 Holly and Micah used dimes and pennies to show some multiplication facts. Write a multiplication equation to show how much money is shown in each arrangement.

ex

Multiplication equation:

2 × 12¢ = 24¢

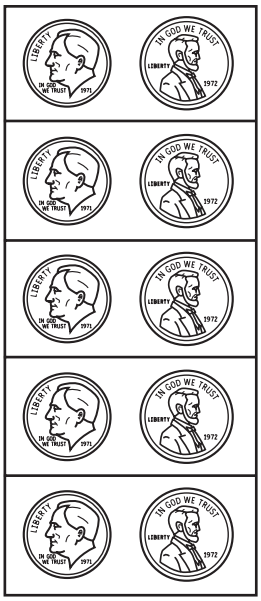
a



Multiplication equation:

3 × 11 = 33¢

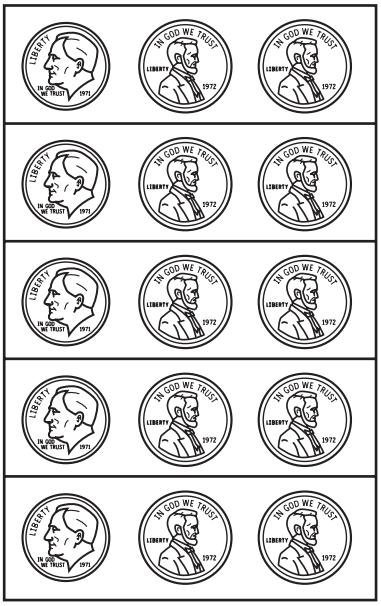
b



Multiplication equation:

5 × 11 = 55¢

c



Multiplication equation:

5 × 12 = 60

Student equations will vary. Examples shown above.

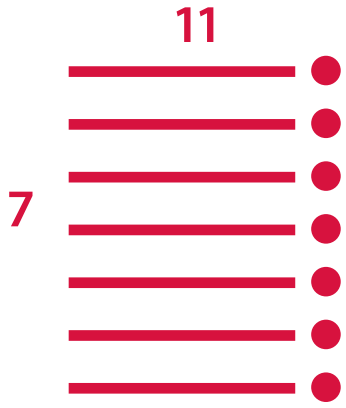
(continued on next page)

NAME | DATE

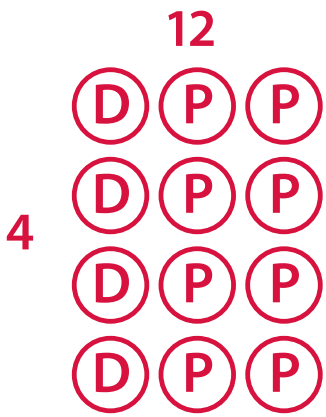
Multiplying by Elevens & Twelves page 3 of 3

3 Make sketches of dimes and pennies or base ten area pieces to show and solve each problem. Label your sketches.

a $7 \times 11 =$ 77



b $4 \times 12 =$ 48



Work will vary. Examples shown.

4 Use numbers, pictures, or words to solve each of the problems below. Show all of your work.

a King School is holding a bake sale. Jose's mom brought 2 dozen chocolate chip cookies, and Jana's dad brought 3 dozen peanut butter cookies. The helpers took the cookies out of their bags and put them on plates. They put 10 on every plate. How many plates did they need?

6 plates; work will vary.

b Sam was helping his mom plant a garden. They planted 7 rows of lettuce. Four of the rows had 11 lettuce plants. Three of the rows had 12 lettuce plants. How many lettuce plants did they plant in all?

80 lettuce plants; work will vary.

NAME | DATE

Multiplication, Division & Perimeter Practice page 1 of 2

1 Complete the multiplication facts.

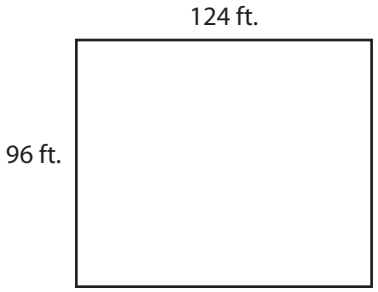
10 × 8 = 80	9 × 1 = 9	5 × 7 = 35	3 × 0 = 0	4 × 8 = 32	5 × 6 = 30	9 × 2 = 18
2 × 7 = 14	9 × 5 = 45	4 × 10 = 40	3 × 4 = 12	5 × 8 = 40	4 × 7 = 28	10 × 10 = 100

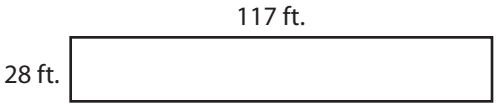
2 Complete the division facts

40 ÷ 5 = 8 12 ÷ 2 = 6 90 ÷ 10 = 9

8 ÷ 1 = 8 25 ÷ 5 = 5 14 ÷ 2 = 7

3 Find the perimeter of each rectangle.





Perimeter = 440 ft. Perimeter = 290 ft.

4 What is the difference between the perimeters of the rectangles above?

150 ft.

(continued on next page)

NAME | DATE

Multiplication, Division & Perimeter Practice page 2 of 2

Show all your work when you solve these problems. Use numbers, sketches, or words.

5 Dale and Lori are buying a watch for their father for his birthday. The watch they want to get him usually costs $129 but it is on sale for $60 less.

a How much will the watch cost?

$69; work will vary.

b If they each pay half, how much will Dale pay?

$34.50; work will vary.

c If they let their brother, Mike, go in on the gift, how much will each pay?

$23; work will vary.

6 **CHALLENGE** Mrs. Larsen wanted her class to work in groups of 4. After she divided them into groups, there were 6 groups of 4 and 1 group of 3.

a How many students were in the class? Write and solve an equation to represent this problem.

27 students; work will vary.
$(6 \times 4) + 3 = 27$

b If the teacher wanted all the groups to be exactly the same size, how many students should be in each group? How many small groups would there be? Show all your work.

3 groups of 9 or 9 groups of 3; student work will vary.

NAME | DATE

More Multiplication Review page 1 of 2

1 Complete the multiplication facts.

70 × 2 = 140	60 × 3 = 180	8 × 30 = 240	40 × 4 = 160	7 × 10 = 70	9 × 50 = 450	30 × 9 = 270
50 × 6 = 300	8 × 60 = 480	7 × 50 = 350	40 × 3 = 120	70 × 8 = 560	4 × 90 = 360	80 × 4 = 320

2 Fill in the missing number in each fact. Then write a related division equation.

4 × 5 = 20	20 ÷ 5 = 4
7 × 3 = 21	21 ÷ 3 = 7
5 × 5 = 25	25 ÷ 5 = 5
2 × 7 = 14	14 ÷ 7 = 2

3 **CHALLENGE** Solve the following:

24 × 2 = 48	14 × 10 = 140	14 × 5 = 70	63 × 2 = 126	52 × 3 = 156	10 × 69 = 690	24 × 4 = 96

4 Sarah says you only need to measure one side of a square to figure out its perimeter. Do you agree with Sarah? Why or why not? Use labeled sketches, numbers, or words to explain your answer.

Agree. Responses will vary. Since all 4 sides of a square are the same length, you can calculate the perimeter with only one side's length known.

(continued on next page)

NAME | DATE

More Multiplication Review page 2 of 2

Use labeled sketches, numbers, or words to explain your answers when you solve these problems.

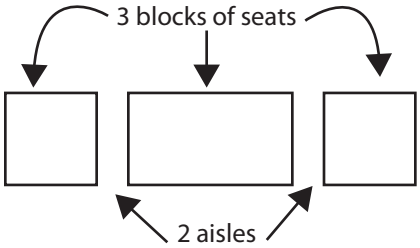
5 Andrea got some free carpet squares at a carpet store. She got enough blue squares to cover 2 feet by 8 feet and enough red squares to cover 5 feet by 8 feet. How many total square feet can be covered if Andrea puts these carpet squares together?

56 feet; work will vary.

6 Mark the two equations below that could be used to help solve Problem 5.

- ○ $(2 + 8) \times (5 + 8) = a$
- ● $(2 \times 8) + (5 \times 8) = a$
- ○ $(2 + 5) + 8 = a$
- ● $(2 + 5) \times 8 = a$

7 **CHALLENGE** The movie theater in our town has 2 aisles and 3 blocks of seats. Two blocks of seats each have 24 rows of 7 seats. The middle block of seats has 24 rows of 14 seats. How many seats are in the theater in all? Show all your work.



672 seats; work will vary.

NAME | DATE

Hours to Minutes page 1 of 2

1 There are 60 minutes in an hour. Use that information to help solve the word problems below. For each problem:

- Write an equation to match each problem and solve it.
- Write the answer on the line.

a James stayed at the After-School club for 2 hours on Tuesday. How many minutes was James at the After-School Club?

Work will vary, example:
2 hrs × 60 min/hr = 120 mins.

James was at the After-School Club on Tuesday for **120** minutes.

b Kara babysat her little cousin from 4:00 p.m. to 7:00 p.m. on Saturday. How many minutes did she babysit her little cousin?

Work will vary, example:
3 hrs × 60 min/hr = 180 mins.

Kara babysat her little cousin for **180** minutes.

c Carlos started his chores at 9:30 a.m. He finished at 11:30 a.m.. How many minutes did he spend doing his chores?

Work will vary, example:
2 hrs × 60 min/hr = 120 mins.

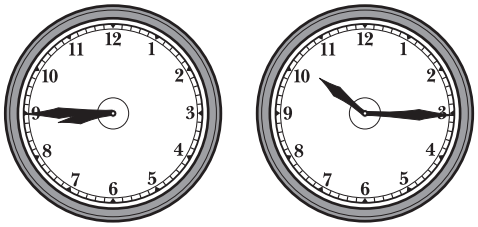
Carlos spent **120** minutes doing chores.

(continued on next page)

NAME | DATE

Hours to Minutes page 2 of 2

2 Mrs. Ramos went out shopping at the time shown on the first clock. She came back at the time shown on the second clock.



a How many hours was Mrs. Ramos out shopping? How did you figure it out?

1 ½ hours; work will vary.

b How many minutes was Mrs. Ramos out shopping? Use numbers, labeled sketches, or words to solve the problem. Show your work.

90 minutes; work will vary.

3 Fill in the lines with the missing numbers.

3 × 40 = **120**	6 × 60 = **360**	3 × 20 = **60**
5 × 50 = **250**	60 × **5** = 300	4 × **30** = 120
20 × **4** = 80	30 × **7** = 210	50 × **3** = 150

4 **CHALLENGE** Are the expressions below equal? If they are, put an = sign in the space. If they aren't, put ≠ in the space. (The symbol ≠ means not equal.)

30 × 60 **≠** 2 × 90	40 × 3 **≠** 20 × 4	60 × 4 **=** 80 × 3

NAME | DATE

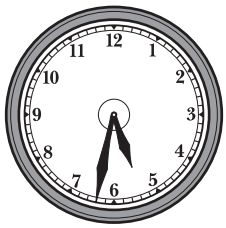
Telling Time to the Minute page 1 of 2

1 Fill in the circle next to the time shown on each clock.

- ○ 5:47
- ○ 4:45
- ● 4:47
- ○ 5:50

- ○ 10:30
- ● 10:28
- ○ 11:28
- ○ 12:30

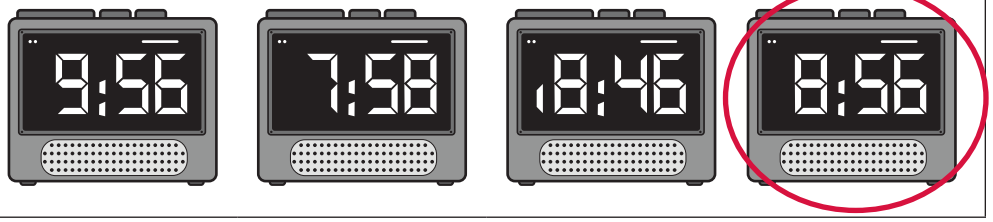
2 Write the time shown on each clock.



5 : 32

12 : 48

3 Circle the digital clock that shows the same time as this analog clock.



4 **CHALLENGE** What fraction of a clock is represented if the hands are at 12 and 3?

Correct responses: ¼ or ¾.

(continued on next page)

NAME | DATE

Telling Time to the Minute page 2 of 2

Show your work when you solve these problems.

5 Konnel is saving money to buy a chemistry set. He has saved $50 so far. That's $\frac{1}{3}$ of the cost of the chemistry set.

a How much does the chemistry set cost?

$150; work will vary.

b How much more money does Konnel need to save to have $\frac{1}{2}$ the cost of the chemistry set?

$25; work will vary.

6 **CHALLENGE** In marathon swimming, athletes swim distances of 10 km or more. Just like in running, swimmers can swim half-marathons and quarter-marathons as well.

a If a marathon swim is 10 km, how many meters would you swim in a half-marathon?

5,000 m; work will vary.

b How many meters would you swim in a quarter-marathon?

2,500 m; work will vary.

Note: A previous version of this page had different problems and answers. The answers to those problems were: 50 miles, 25 miles, $75, and $12.50.

NAME | DATE

Division & Fractions page 1 of 2

1 Complete the division facts.

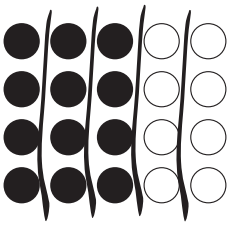
$20 \div 5 =$ **4** $20 \div 10 =$ **2** $18 \div 2 =$ **9**

$18 \div 3 =$ **6** $18 \div 6 =$ **3** $18 \div 9 =$ **2**

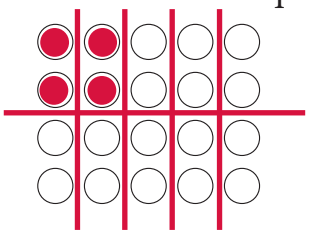
2 Divide each set into equal groups. Shade in some circles as directed.

Work will vary. Examples shown.

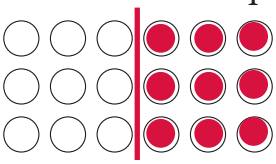
ex Shade in $\frac{3}{5}$ of the circles.
Hint: Divide the set into 5 groups.



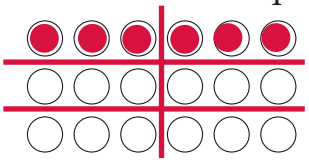
Shade in $\frac{2}{10}$ of the circles.
Hint: Divide the set into 10 equal groups.



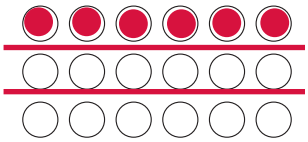
Shade in $\frac{1}{2}$ of the circles.
Hint: Divide the set into 2 equal groups.



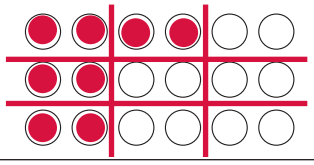
Shade in $\frac{2}{6}$ of the circles.
Hint: Divide the set into 6 equal groups.



Shade in $\frac{1}{3}$ of the circles.
Hint: Divide the set into 3 equal groups.



Shade in $\frac{4}{9}$ of the circles.
Hint: Divide the set into 9 equal groups.



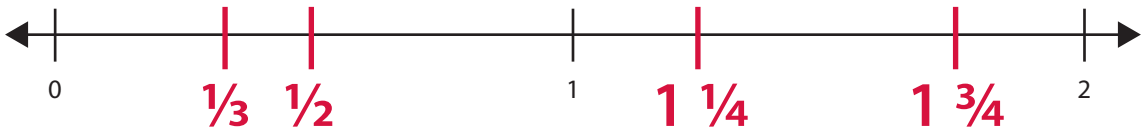
3 **a** Find two fractions above that are equal. Write them here.

Answers will vary. For example, ⅔ and ⅓ are equal.

b How do you know the fractions are equal?

Responses will vary. Example: ⅔ and ⅓ are equal because they are both equal to ⁶⁄₁₈.

4 Write each of these fractions where they belong on the number line: $\frac{1}{2}$, $1\frac{1}{4}$, $\frac{1}{3}$, $1\frac{3}{4}$



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NAME | DATE

Division & Fractions page 2 of 2

5 Daniel, Emilia, Mía, and Aarón were picking pears in their grandparents' orchard. They had each picked the same number of pears at lunch time, when their grandpa gave them each 6 more pears. Now the four kids had 80 pears in all.

a How many pears did each child have before their grandpa gave them more? Show your work.

14 pears; work will vary.

b Mark the equation that could help you solve problem 5a.

- ○ $p + 6 + 4 = 80$
- ○ $80 - (6 \times 4) = p$
- ● $80 = (6 \times 4) + (p \times 4)$
- ○ $(80 \div 4) + 6 = p$

c Write an equation that shows another way to solve the problem. Use h for the unknown number.

Work will vary.
Examples: $(h + 6) \times 4 = 80$; $(80 \div 4) - 6 = h$

6 The next day, the kids went to a nut orchard and picked up 220 hazelnuts. They gave $\frac{1}{4}$ of the hazelnuts to their neighbor and their mother used $\frac{2}{4}$ of the hazelnuts in muffins. The rest of the hazelnuts were saved for snacks.

a How many hazelnuts went into the muffins? Show your work.

110 hazelnuts; work will vary.

b How many hazelnuts did the family have for snacking? Show your work.

55 hazelnuts; work will vary.

Note: A previous version of this page had different problems and answers. The answers to those problems were: 7 strawberries, the first and last options, a student-written equation (work will vary), 62 strawberries, and 31 strawberries.

NAME | DATE

Quadrilaterals & Fractions page 1 of 2

1 Fill in the bubble to show the answer. Then write an explanation.

a This shape is a:

○ trapezoid ○ square ● parallelogram ○ rectangle

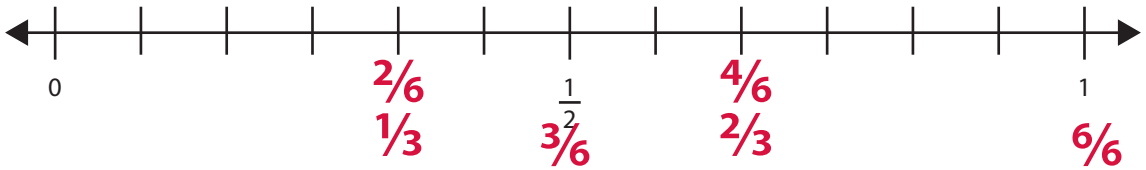
b Explain why: **Student responses will vary.**
Example: *It has 2 pairs of parallel sides.*

c How do you know that the shape in the problem above is *not* a rectangle? Use labeled sketches, numbers or words to explain.

Student responses will vary. Example: *It can't be a rectangle because it doesn't have 4 right angles, it has 0 right angles.*

2 **a** Write these fractions where they belong on the number line below:

$\frac{4}{6}$ $\frac{2}{6}$ $\frac{6}{6}$ $\frac{3}{6}$ $\frac{1}{3}$ $\frac{2}{3}$



b Name two pairs of equivalent fractions from the number line above.

2/6 = 1/3 and 1/2 = 3/6 or 4/6 = 2/3

c What fraction is equivalent to 1 on the number line above? 6/6 = 1

3 **a** Write in fractions on the number line below:

b Name two equivalent fractions from the number line above.

2/4 = 1/2

c **CHALLENGE** Write in a fraction for 1 on the number line for problem 3a.

(continued on next page)

NAME | DATE

Quadrilaterals & Fractions page 2 of 2

4 Jenny worked on her homework from 6:15 until 7:15 last night. Spelling took $\frac{1}{6}$ of the time; math took $\frac{1}{3}$ of the time and reading took $\frac{1}{2}$ of the time.

a Jenny spent 10 minutes on spelling.

b Jenny spent 20 minutes on math.

c Jenny spent 30 minutes on reading.

5 **CHALLENGE** The students at Shady Cove School voted for a school mascot. Half the votes went to the Pilots and Mariners, with the Mariners getting 30 more votes than the Pilots. The Eagles got 60 votes and the Dolphins got twice as many votes as the Eagles.

a What is the new mascot of Shady Cove School? How do you know?

Dolphins. Work will vary. Example:
Eagles: 60 Pilots: 75
Dolphins: 120 Mariners: 105

b How many students voted? Show your work.

360; work will vary. Example:
Half the votes = 180
Total votes = 360

NAME | DATE

More True or False Challenges page 1 of 2

1 An equation is true if both sides are equal. It is false if both sides are not equal. Circle true or false for each equation. You do not need to explain all your answers.

	Equation	Circle One		Optional Explanation
ex	$18 - 3 = 5 \times 3$	(T)	F	18 − 3 s 15 nd 5 + 5 + 5 = 15
a	$5 + 8 = 3 \times 4$	T	(F)	Student responses will vary.
b	$6 \times 4 = 3 \times 8$	(T)	F	
c	$20 - 10 = 20 \div 2$	(T)	F	
d	$8 + 8 = 4 \times 5$	T	(F)	
e	$5 + 7 = 20 - 8$	(T)	F	

2 Use <, >, or = to complete each equation.

ex $32 + 876$ **>** $870 + 24$

a $100 \div 10$ **<** $100 \div 5$

b 6×7 **>** 5×8

c $478 - 138$ **<** $678 - 132$

3 Pick the equation that will help you solve the problem. Then solve the problem.

a Josh got 7 toy cars from each of his 4 brothers. He gave 12 cars to his friend. How many cars did he have left?

- ○ $7 + 4 - 12 = c$
- ● $(7 \times 4) - 12 = c$
- ○ $(7 \times 12) - 4 = c$

b Josh has **16** cars left.

4 Pick the equation that will help you solve the problem. Then solve the problem.

a Sarah left her house at 3:00. It took her 15 minutes to go to the bank. Then it took her 20 minutes to do some shopping. Then it took 15 minutes to drive home. What time did Sarah get home?

- ○ $300 - 15 - 20 - 15 = m$
- ○ $15 + 20 - 15 = m$
- ● $15 + 20 + 15 = m$

b Sarah got home at **3:50**.

(continued on next page)

NAME | DATE

More True or False Challenges page 2 of 2

Use labeled sketches, numbers, or words to show your work on these problems.

5 Sage's Aunt Barbara is making her famous orange spongecake for a party. The recipe requires 5 eggs and makes a cake that will serve 8 people. 72 people will be at the party.

a How many cakes should Aunt Barbara make?

9 cakes; work will vary.

b How many dozens of eggs will she need to make that many cakes?

4 dozen; work will vary.

c How many eggs will be left over?

3 eggs; work will vary.

6 **CHALLENGE** Cameron is having a birthday party. His father bought a baseball cap for every party guest. He didn't buy a cap for Cameron because he already had one. The baseball caps cost $5.95 each. Cameron's dad spent $71.40 on the caps. How many kids came to the party?

12 kids; work will vary.

NAME | DATE

Looking for Bridges page 1 of 2

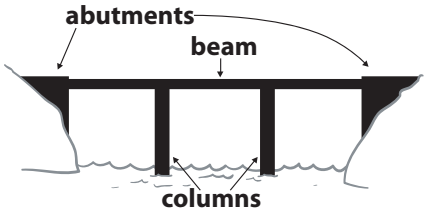
Note to Families

We are beginning a unit of study about bridges. Please take some time to locate examples of the three kinds of bridges shown below. You can find them in your neighborhood, or you could take a drive around your town or city. If you have access to the Internet, you could also find examples online. You might also find examples in books at home or the library. For each bridge, record its name, location, type (beam, arch, or suspension), span length (an estimation will do), and other special features on the table on the back of this sheet.

Three Basic Kinds of Bridges

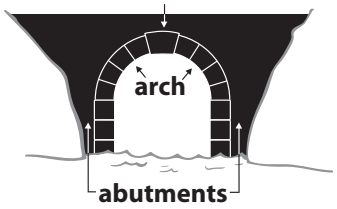
Beam Bridge

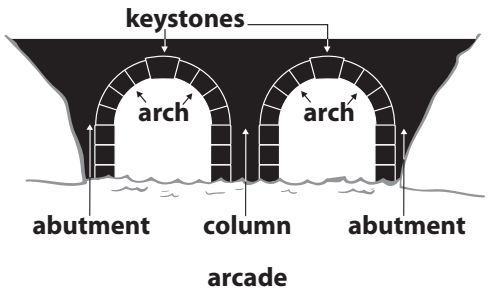
A beam bridge is constructed of a beam supported by at least two abutments or columns. Beam bridges tend to be simple and relatively inexpensive to build. They are most useful for bridging short spans.



Arch Bridge

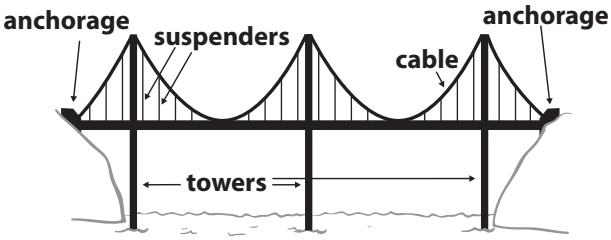
An arch bridge is made of an arch between two abutments. It may be made of just one arch between two abutments or of many arches, columns, and abutments linked together, which is called an arcade.





Suspension Bridge

Suspension bridges are made of roadways suspended from cables and suspenders that hang from towers. The cables extend all the way from an anchorage at one end of the bridge to another anchorage at the other end of the bridge. They are the most expensive kind of bridge to build and are capable of spanning the greatest distances.



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NAME | DATE

Looking for Bridges page 2 of 2

Name	Location	Type	Span	Special Features

Student responses will vary.

Some additional information that we learned together:

Answer Key

NAME | DATE

Comparing Mass page 1 of 2

1 The table shows the mass of different types of balls used in sports. Use the table to answer the questions below.

Type of Ball	Mass
Ping pong ball	3 g
Baseball	150 g
Basketball	600 g
Soccer ball	420 g
Football	430 g
Volleyball	270 g
Golf ball	45 g
Tennis ball	57 g
Bowling ball	9 kg

a Which ball has the most mass?

bowling ball

b Which two balls are closest in mass?

soccer ball and football

c What is the difference in mass between the bowling ball and the basketball? Show your work.

8,400 g or 8.4 kg
Student work will vary.

d Do two tennis balls have more mass or less mass than a baseball?

less

e How many ping pong balls equal the mass of one golf ball? Show your work.

15; work will vary.

NAME | DATE

Comparing Mass page 2 of 2

2 Solve the problems. Show all your work.

a The Arctic Animals Zoo's female caribou has a mass of 82 kg. The female polar bear's mass is 161 kg. How much more massive is the polar bear than the caribou?

79 kg; work will vary.

b The zookeeper says that a wolverine's mass is 3 times as much as that of an arctic hare. If a typical arctic hare has a mass of 5 kg, what is the mass of a typical wolverine?

15 kg; work will vary.

c The refrigerator where the black bear's food is stored holds 35 kg of food. If the bear eats 5 kg of food a day, how many days' worth of bear food can be stored in the refrigerator?

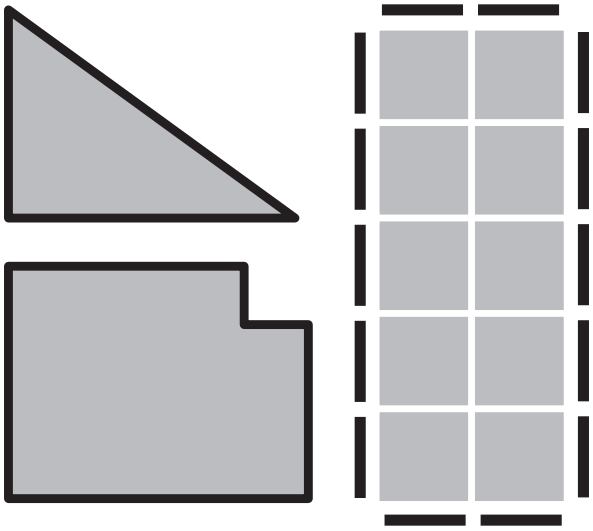
7 days worth of food; work will vary.

d **CHALLENGE** The Arctic Animals Zoo is planning a new habitat for 4 arctic wolves. Each wolf eats about 2 kilograms of food per day. How much food does the zookeeper need to have ready for the wolves' first 7 days at the zoo?

56 kg; work will vary.

NAME | DATE

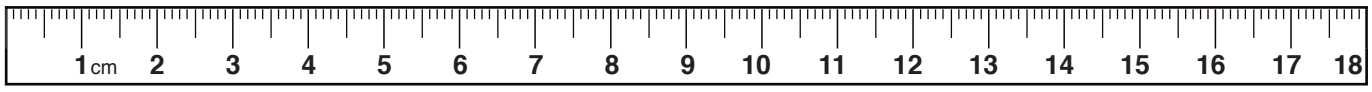
Finding Area & Perimeter page 1 of 3



Perimeter is the distance all the way around a figure. Perimeter is measured in linear units like centimeters, meters, inches, and feet.

Area is the amount of surface a figure covers. Area is measured in square units like square centimeters, square meters, square inches, and square feet.

You can use any ruler or measuring tape marked in centimeters for this assignment, or cut out the centimeter ruler below. Keep the ruler for use in future assignments.



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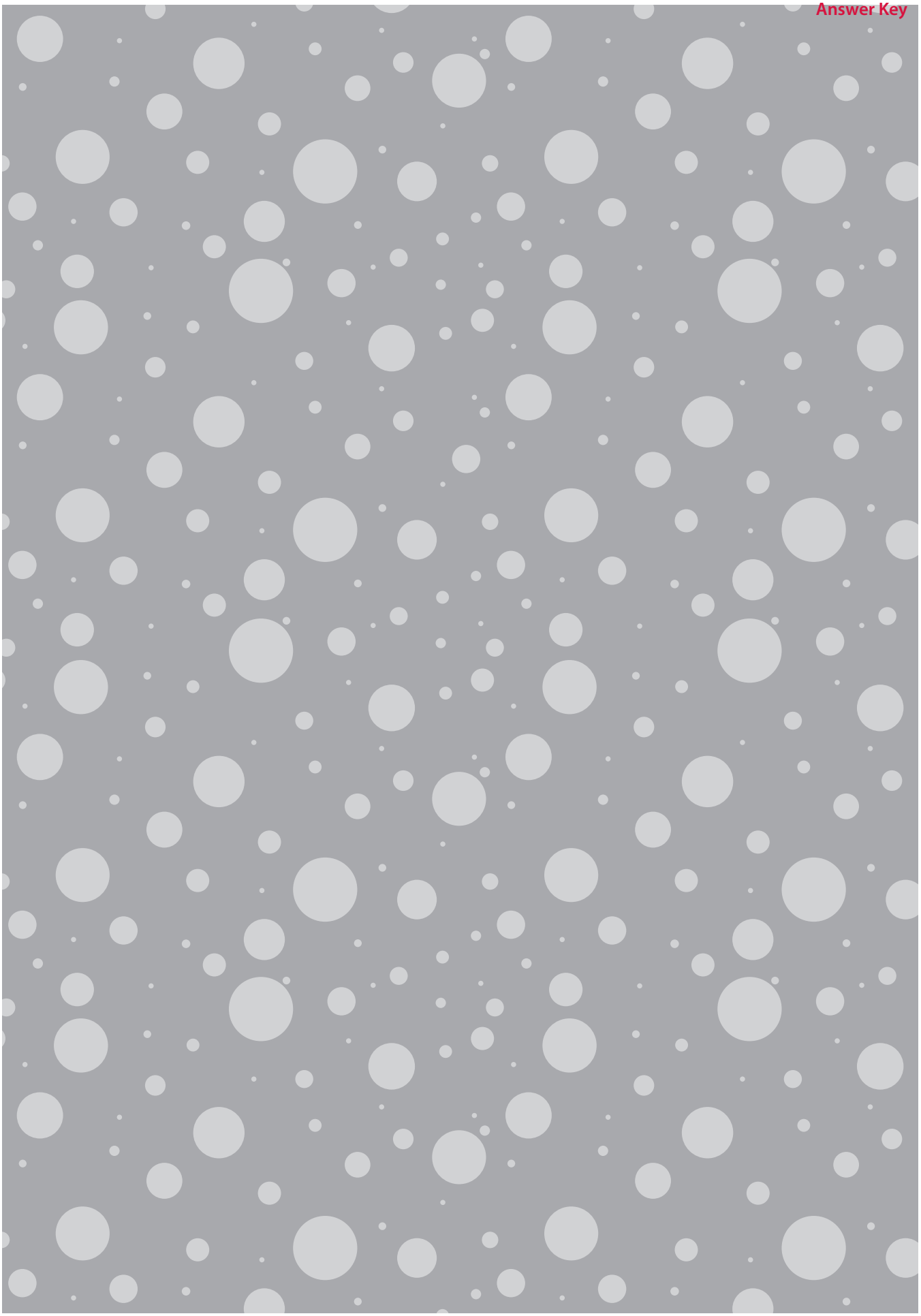
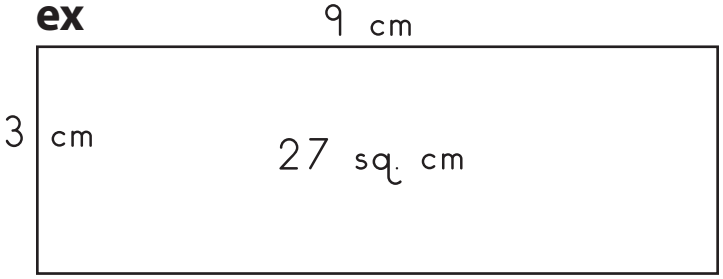


NAME | DATE

Finding Area & Perimeter page 2 of 3

1 Measure the dimensions (length and width) of each rectangle. Label the dimensions, then find the rectangle's area and perimeter using equations. Show your work. The first one is done as an example.

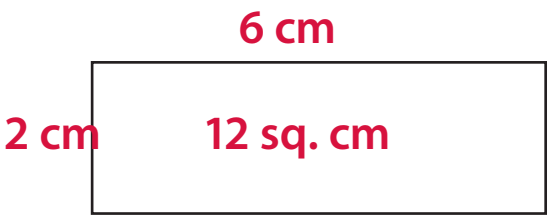
ex



Perimeter: (2 × 3) + (2 × 9) = 24 cm

Area: 3 × 9 = 27 sq. cm

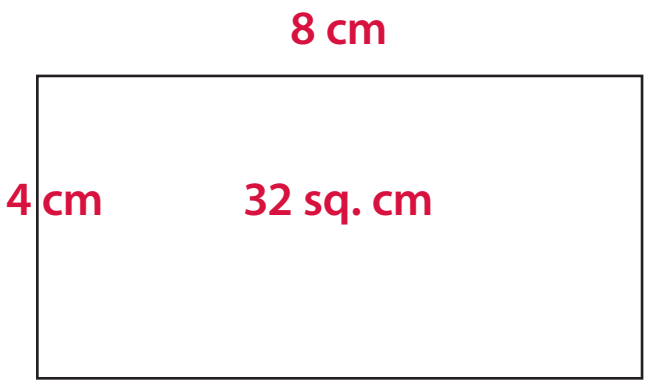
a



Perimeter: (2 + 6) × 2 = 16 cm

Area: 2 × 6 = 12 sq. cm

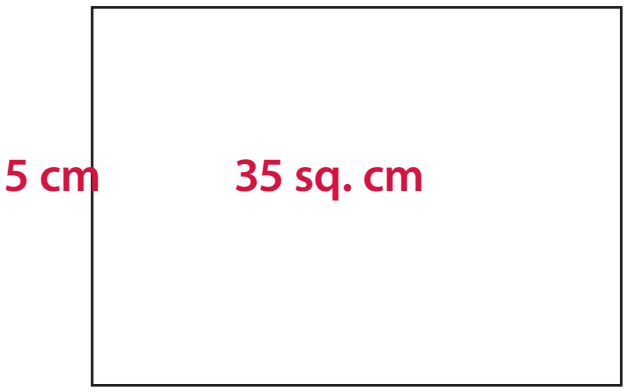
b



Perimeter: (2 × 4) + (2 × 8) = 24 cm

Area: 4 × 8 = 32 sq. cm

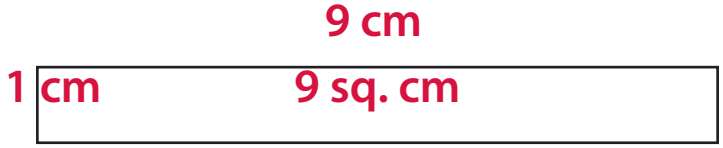
c



Perimeter: (5 + 7) × 2 = 24 cm

Area: 5 × 7 = 35 sq. cm

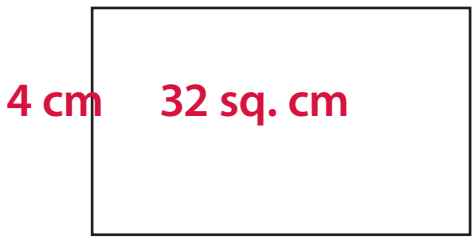
d



Perimeter: (2 × 1) + (2 × 9) = 20 cm

Area: 1 × 9 = 9 sq. cm

e



Perimeter: (4 + 8) × 2 = 24 cm

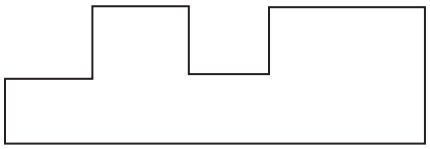
Area: 4 × 8 = 32 sq. cm

(continued on next page)

NAME | DATE

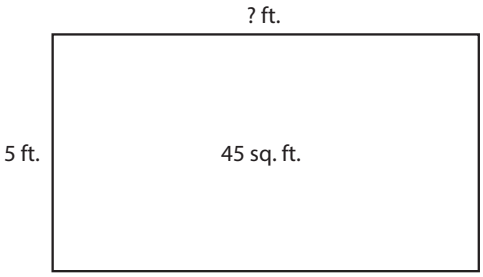
Finding Area & Perimeter page 3 of 3

2 Hector says you have to measure the length of every side of this figure to find its perimeter. Do you agree? Why or why not? Use numbers, labeled sketches, or words to explain your answer.



Responses will vary. Some will want to measure every side. Others might trust that all angles in the figure are right angles and be able to draw conclusions about side lengths without measuring them all.

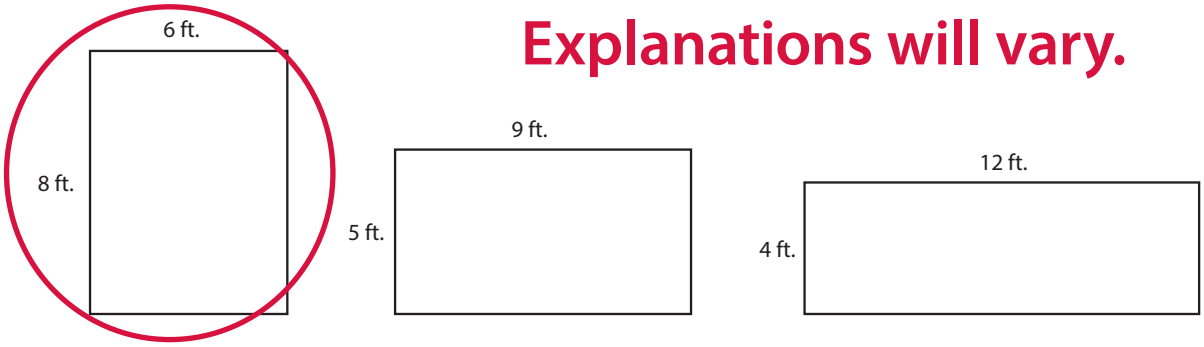
3 This rectangle has an area of 45 square feet. What is the missing dimension? Show your work.



9 ft.; work will vary.

4 Alexandra and her dad built a deck in their back yard. The deck's area is 48 square feet and its perimeter is 28 feet. Circle the drawing that shows the deck they built. Use numbers, sketches or words to explain your answer.

Explanations will vary.



5 **CHALLENGE** For which of these situations would you calculate area? For which of them would you calculate perimeter? Check a box for each one.

Situation	Area	Perimeter	Neither
Finding the number of tiles needed to cover a floor	✓		
Finding out the thickness of the dictionary			✓
Deciding how many feet of fencing is needed to surround a rectangular yard		✓	
Cutting a strip of tape as long as the whiteboard			✓
Finding out how much paint it will take to paint one wall of your room	✓		

NAME | DATE

Measuring Scavenger Hunt page 1 of 2

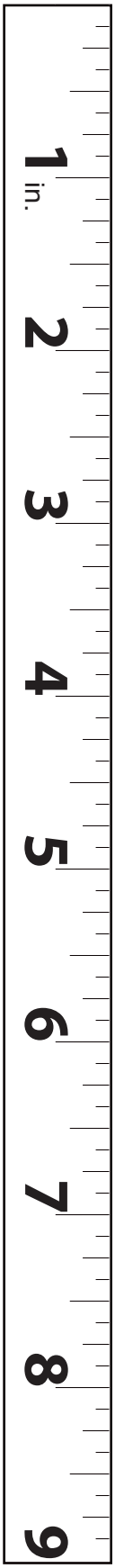
1 Look around your home, yard, or anywhere else to find objects that are about as long as the goal lengths in the table below. They don't have to be exact, just as close as you can find. Measure their actual lengths and calculate the difference between the goal and the actual length.

You can use any ruler, yardstick or measuring tape marked in inches, or use the inch ruler to the right. Cut out the ruler if you like. Keep it for use in future assignments.

Goal Length	Object	Actual Length	Difference
$4\frac{1}{2}$ inches			
2 inches			
$1\frac{1}{2}$ feet	Responses will vary.		
$\frac{3}{4}$ inch			
14 inches			

2 Now look for objects that have an area close to the areas in the table below. Measure the object's dimensions and record them in the table. (You can use the side or face of a three-dimensional object, as shown in the example.)

Goal Area	Object	Dimensions
50 square inches	the ide of my oaster	$6\frac{1}{2}$ nches × 8 $\frac{1}{2}$ che
4 square inches		
12 square inches	Responses will vary.	
24 square inches		



(continued on next page)

NAME | DATE

Measuring Scavenger Hunt page 2 of 2

Footprints

3 An object's *footprint* is the space it takes up when it sits on a flat surface, like the floor or a piece of paper.

a Find an object with a rectangular or nearly rectangular base that you can fit on the centimeter grid below. Place it on the grid and trace its outline. This outline is its footprint.

b What object did you choose?

Responses will vary.

c What is the approximate area of the object's footprint? Show your work.

Responses will vary.

d **CHALLENGE** If you wanted to store 10 of these objects together on a shelf without stacking any of them on top of each other, how big would the shelf's area need to be?

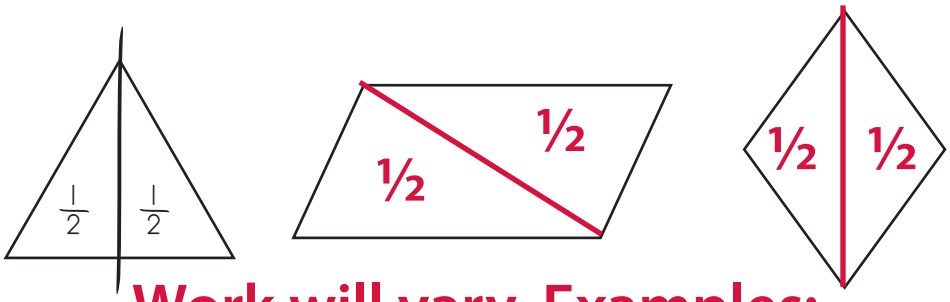
Responses will vary.

NAME | DATE

Dividing Shapes into Triangles page 1 of 2

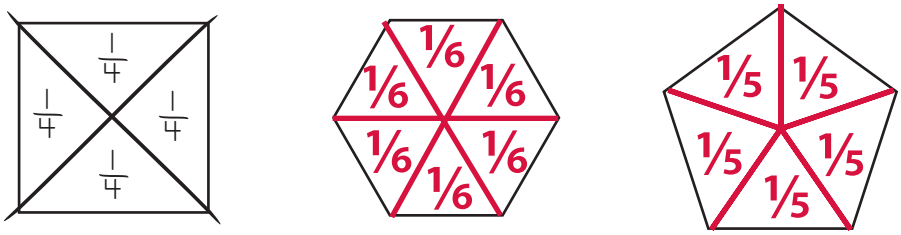
1 Divide the shapes. If you need to, measure to make sure the partitions are equal. You can use any ruler or measuring tape, or a paper ruler from the last two Home Connections.

a Draw lines to divide these shapes into two equal triangles. Label each triangle with a fraction to show its part of the whole. The first one has been done for you.

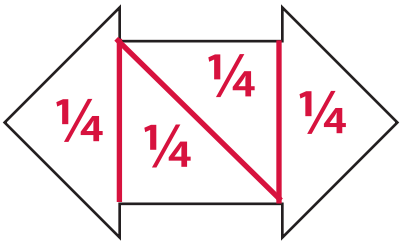


Work will vary. Examples:

b Draw lines to divide these shapes into as many triangles as they have sides. Label each triangle with a fraction to show its part of the whole. The first one has been done for you.



c Draw 3 lines to divide the shape into 4 congruent triangles and label each triangle with a fraction to show its part of the whole.



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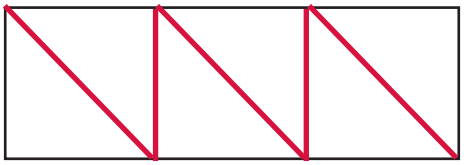
NAME | DATE

Dividing Shapes into Triangles page 2 of 2

2 Draw two shapes of your own, then divide them into equal triangles. Mark each triangle with a fraction to show its part of the whole.

Responses will vary.

3 a **CHALLENGE** Divide the rectangle into six equal triangles.



2 cm 2 cm 2 cm

b **CHALLENGE** How many triangles are in $\frac{1}{2}$ of the rectangle?

3 triangles

c **CHALLENGE** How many triangles are in $\frac{2}{3}$ of the rectangle?

4 triangles

NAME | DATE

Dress Rehearsal page 1 of 2

Red Barn Theater had a full day of rehearsal, technical work, costume and makeup checks, and other activities the Saturday before the opening night of their big play. Each activity started at a certain time, so people in the theater had to watch the clock to be on stage, backstage, or at other places in the theater at the right times.

1 There is an analog clock in the lobby and a digital clock in each of the dressing rooms. Read the clocks below and write the time to show when each event took place.

a Stage technicians started hanging lights at **7:52**.

b The technicians did a dry tech run at **9:35**.

c The cast finished their runthrough in the lobby at **11:37**.

d The stage manager ordered pizzas and sandwiches for lunch at **11:44**.

e Lunch was supposed to start at noon, but the technicians needed more time to finish, so everyone had lunch at **12:15**.

f The cast and crew did a quick runthrough rehearsal of only the technical cues at **1:33**.

g The cast did a costume parade for the directors in the lobby at **2:46**.

h Hair and makeup was finished at **3:22**.

i The full dress rehearsal started at **3:45**.

j Everyone gathered for notes at **5:51**.

(continued on next page)

NAME | DATE

Dress Rehearsal page 2 of 2

2 Notes begin immediately after the full dress rehearsal is complete. How long did the full dress rehearsal take? Show your work.

2 hrs 6 mins.
Work will vary.

3 During dress rehearsal, the show doesn't stop for intermission (they just quickly change the sound and lights for practice). During a public performance, the show will have a 15-minute intermission. How would the stage manager calculate the full time of the show including intermission? Write an equation to show your thinking. You can use letters in your equation to stand for unknown amounts.

Work and answers will vary. Examples:
2 hrs 6 minutes + 15 minutes = *t*
r* + 15 = *t
2 hrs 6 mins + 15 mins. = 2 hrs. 21 mins.

4 As soon as notes are done, the cast and crew put everything away and clean up the theater. After cleanup, everyone goes out for dinner. Notes took 18 minutes, and the cast and crew went out to dinner at 7:05. How long did it take for them to clean up? Show your work.

56 mins.
Work will vary.

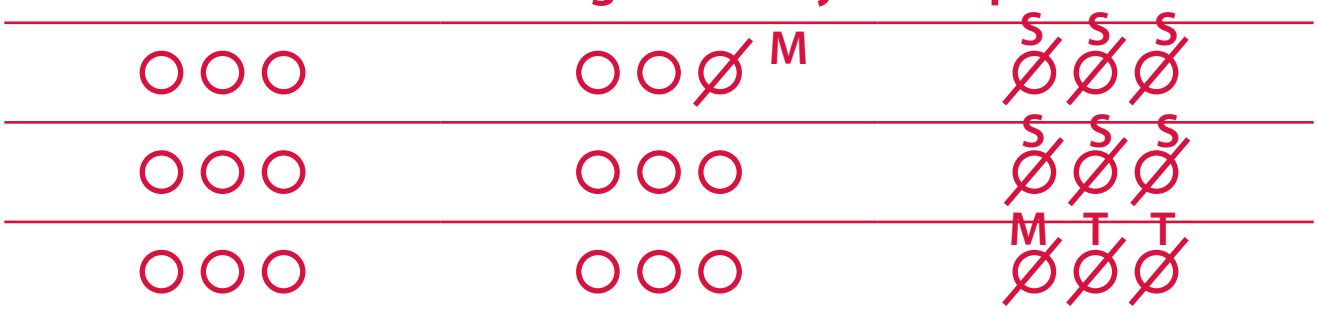
NAME | DATE

Garden Shop page 1 of 2

1 Casey works at the garden store, and one job he does there is to stock the shelves. Yesterday he had 27 cans of plant food to stock, so he put an equal number of cans on each of 3 empty shelves. Later that day, Tammy came by and bought 2 cans of plant food from the bottom shelf. A little while after that, Shane dropped in and bought 6 cans of plant food—3 from the top shelf and 3 from the middle shelf. Right before closing time, Michael bought 2 cans of plant food—1 from the bottom shelf and 1 from the top shelf. How many cans of plant food were on each shelf at the end of the day?

a Make a drawing or sketch a model to show the situation.

Student drawings will vary. Example:



b Solve the problem. Show all your work.

Top: 5 cans
Middle: 6 cans
Bottom: 6 cans

c How do you know that your answers make sense? Come up with a way to check your work and explain it here.

Student responses will vary.

(continued on next page)

NAME | DATE

Garden Shop page 2 of 2

2 Owen, Jack, and Kian were shopping for garden supplies with their dad. Their dad said that the kids could split the money he had left after he bought what they needed for the garden. They bought a trowel for $5, two packs of seeds for $1 each, and two bags of flower bulbs that were $4 each. Their dad paid with a $20 bill and a $10 bill, then divided the change among the kids. How much money did Owen, Jack, and Kian each get?

a Write a list of steps you will need to take to solve the problem.

Responses will vary. Example:
1. Determine the total cost.
2. Subtract from $30.
3. Divide the change by 3.

b Solve the problem. Show all your work.

Student work will vary. Example:
5 + 2 + 8 = $15
$30 – $15 = $15
$15 ÷ 3 = $5
$5 each

c How do you know that your answer makes sense? Come up with a way to check your work and explain it here.

Student responses will vary.

NAME | DATE

Most & Least Fractions page 1 of 2

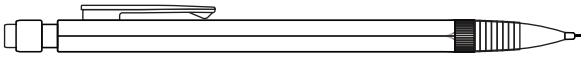
1 Mr. Wilder bought 36 mechanical pencils to give away as prizes to his students. One-fourth of the pencils were red and $\frac{1}{3}$ of the pencils were purple.

a Were more of the pencils red or purple?

purple

b **CHALLENGE** If the rest of the pencils were yellow, how many yellow pencils did Mr. Wilder buy? Show your work.

15 yellow pencils.
Student work will vary.



2 Ellie made 24 cupcakes to take to her friend's party. She put vanilla frosting on all of the cupcakes. Then she put chocolate sprinkles on $\frac{1}{4}$ of them and red sugar on $\frac{1}{2}$ of them. She left the rest of them plain with only frosting.

a What did most of the cupcakes have on them?

red sugar

b **CHALLENGE** What fraction of the cupcakes did Ellie leave with only frosting? Use numbers, words, or pictures to show your work.

¼ of the cupcakes
Student work will vary.

(continued on next page)

NAME | DATE

Most & Least Fractions page 2 of 2

3 Shawn is sorting his 12 favorite chapter books by theme onto a shelf. One-fourth of the books are about animals, $\frac{1}{6}$ of the books are about trucks, and $\frac{1}{2}$ of the books are about adventures. The rest of the books are about space.

a Which type of book will Shawn have the least of on his shelf?

truck books

b Which type of book will Shawn have the most of on his shelf?

adventure books

c Does Shawn have more favorite books about animals or about trucks? Write an expression using >, =, or < to show.

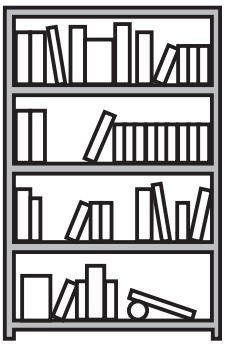
animals
3 > 2

d **CHALLENGE** What fraction of Shawn's favorite books are about space? Use numbers, words, or pictures to show your work.

1/12 are about space.
Student work will vary.

e **CHALLENGE** Does Shawn have more favorite books about animals or about space? Write an expression using >, =, or < to show.

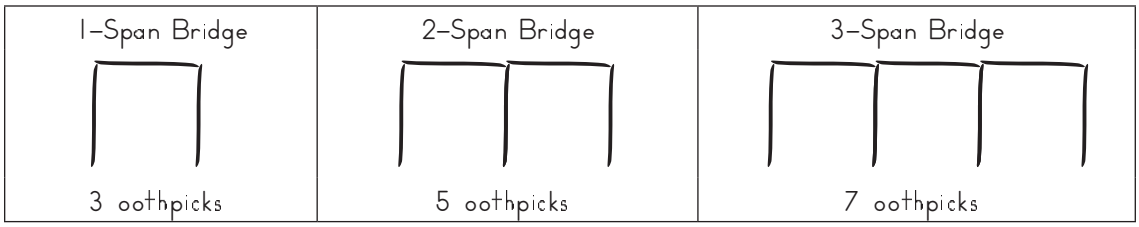
More of his favorite books are about animals.
3 > 1



NAME | DATE

Bridge Patterns page 1 of 2

1 Jameson built tiny beam bridges out of toothpicks. He drew sketches of his beam bridges like these:



a How many toothpicks will it take to build a beam bridge with 12 spans?

25 toothpicks

b Explain your answer using labeled sketches, numbers, and words.

Responses will vary. Example:
Double the number of spans and add 1 to determine the number of toothpicks.

c Fill in the table to show how many toothpicks are needed for each bridge.

Beam Bridge Spans	1	2	3	4	5	6	7	8	9	10	11	12
Number of Toothpicks	3	5	7	**9**	**11**	**13**	**15**	**17**	**19**	**21**	**23**	**25**

d **CHALLENGE** How many toothpicks will it take to build a beam bridge with 20 spans? Use words, pictures, or numbers to show your work and explain your answer.

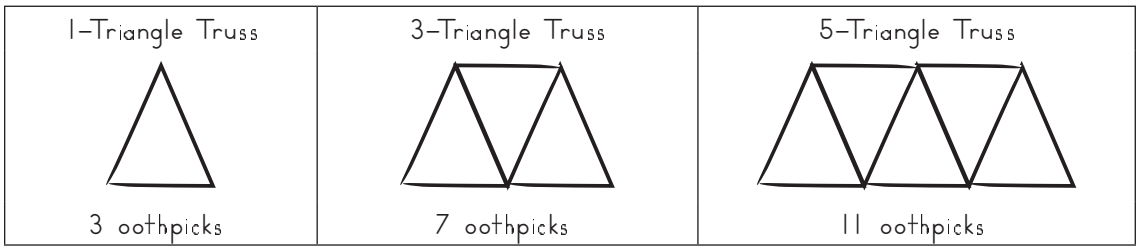
41 toothpicks
Work and explanations will vary.

(continued on next page)

NAME | DATE

Bridge Patterns page 2 of 2

2 Jameson built some tiny truss bridges using toothpicks, too. He made sketches of his bridges like those below.



a How many toothpicks will it take to build a truss bridge with 15 triangles?

31 toothpicks

b Explain your answer using labeled sketches, numbers, and words.

Responses will vary. Example:
Double the number of triangles and add 1 to determine the number of toothpicks.

c Fill in the table to show how many toothpicks are needed for each bridge.

Triangles	1	3	5	7	9	11	13	15	17
Number of Toothpicks	3	7	11	**15**	**19**	**23**	**27**	**31**	**25**

d **CHALLENGE** How many toothpicks will it take to build a truss bridge with 36 triangles? Use words, pictures, or numbers to show your work and explain your answer.

73 toothpicks
Work and explanations will vary.