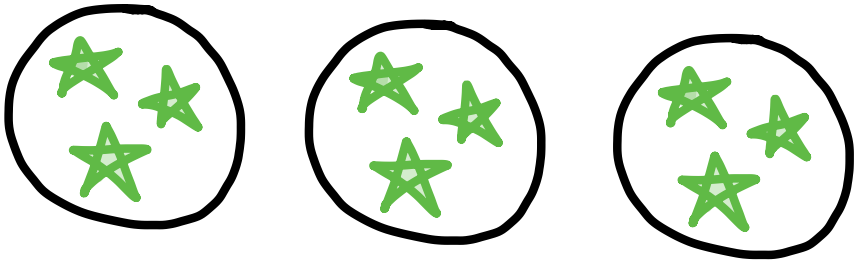
Name _____ Date _____

1. The picture below shows 4 groups of 2 slices of watermelon. Fill in the blanks to make true repeated addition and multiplication sentences that represent the picture.

2 + 2 + 2 + 2 = 8

4 × 2 = 8

2. Draw a picture to show 3 + 3 + 3 = 9. Then, write a multiplication sentence to represent the picture.



3 x 3 = 9

Name _____ Date _____

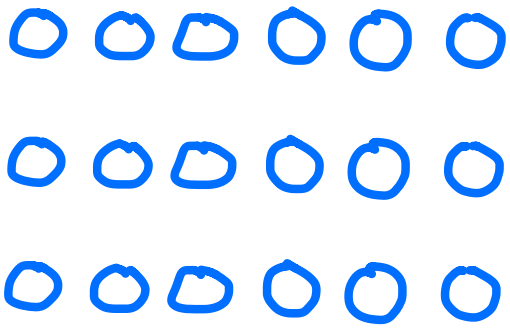
1. 

a. There are 4 rows of stars. How many stars are in each row? 3

b. Write a multiplication equation to describe the array. 4x3

You should also accept 3×4.

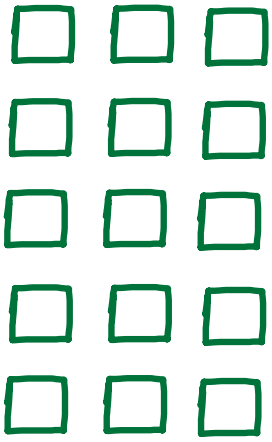
2. Judy collects seashells. She arranges them in 3 rows of 6. Draw Judy's array to show how many seashells she has altogether. Then, write a multiplication equation to describe the array.

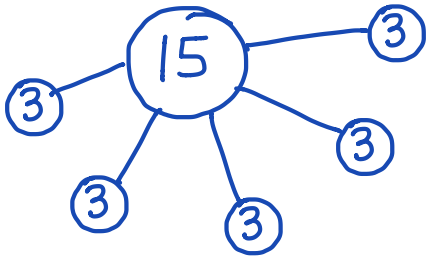


3×6=18

Name _____ Date _____

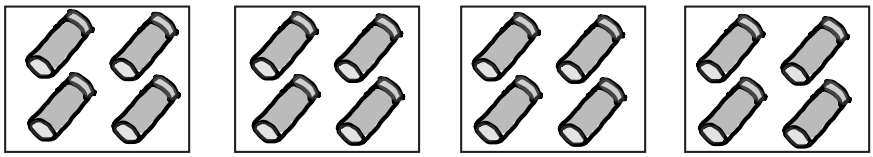
Draw an array that shows 5 rows of 3 squares. Then, show a number bond where each part represents the amount in one row.





Name _____ Date _____

1. There are 16 glue sticks for the class. The teacher divides them into 4 equal groups. Draw the number of glue sticks in each group.

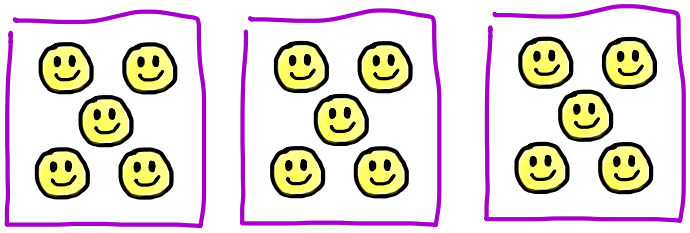


There are 4 glue sticks in each group.

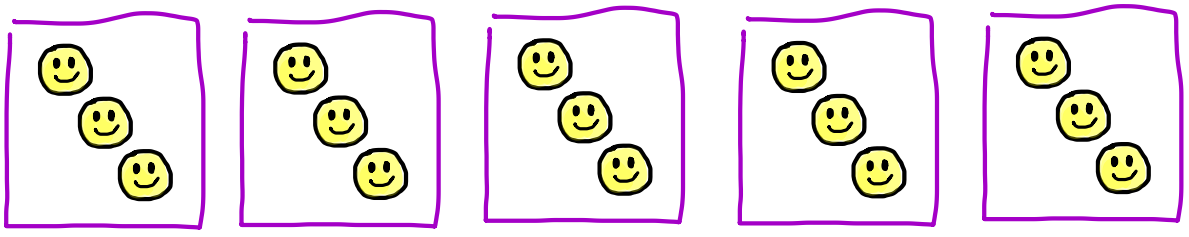
16 ÷ 4 = 4

2. Draw a picture to show 15 ÷ 3. Then, fill in the blank to make a true division sentence.

15 ÷ 3 = 5

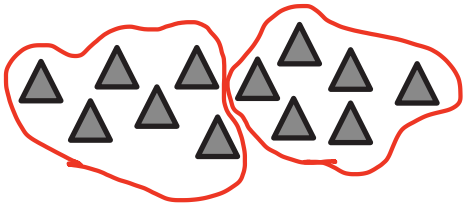


NOTE: students may draw the following. If they do, tell students their drawing is mathematically correct, but we were expecting 3 groups, not 5.



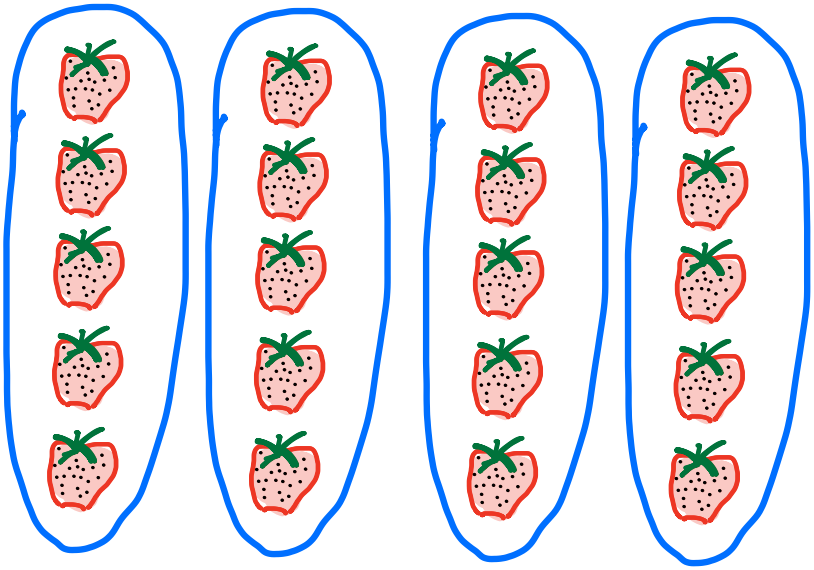
Name _____ Date _____

1. Divide 12 triangles into groups of 6.



12 ÷ 6 = 2

2. Spencer buys 20 strawberries to make smoothies. Each smoothie needs 5 strawberries. Use a count-by to find the number of smoothies Spencer can make. Make a drawing to match your counting.



5 10 15 20

20 ÷ 5 = 4

Name _____ Date _____

Cesar arranges 12 notecards into rows of 6 for his presentation. Draw an array to represent the problem.

12 ÷ 6 = 2

2 × 6 = 12

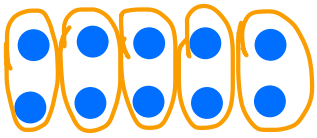
What do the unknown factor and quotient represent? The number of rows (groups) of 6.

Name _____ Date _____

$2 \times 5 = 5 \times 2$

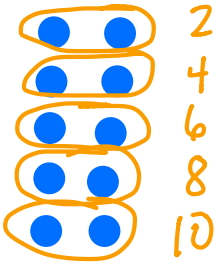
Do you agree or disagree with the statement in the box? Draw arrays and use skip-counting to explain your thinking.

2x5 means
2 rows of 5.



2 4 6 8 10

5x2 means
5 rows of 2.



2
4
6
8
10

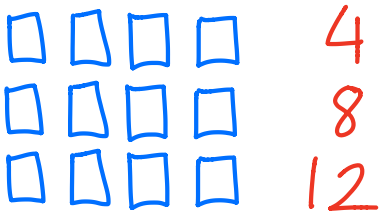
I agree that 2x5=5x2 because I can see skip counting by two's up to 10 in both arrays.

Explanations will vary.

Name _____ Date _____

Mary Beth organizes stickers on a page in her sticker book. She arranges them in 3 rows and 4 columns.

a. Draw an array to show Mary Beth's stickers.



b. Use your array to write a multiplication sentence to find Mary Beth's total number of stickers.

3 x 4 = 12

c. Label your array to show how you skip-count to solve your multiplication sentence.

d. Use what you know about the commutative property to write a different multiplication sentence for your array.

4 x 3 = 12 because I see 4 columns with 3 stickers in each column.

Name _____ Date _____

1. Mrs. Stern roasts cloves of garlic. She places 10 rows of two cloves on a baking sheet.

   Write an equation to describe the number of cloves Mrs. Stern bakes.

   10 × 2 = 20

2. When the garlic is roasted, Mrs. Stern uses some for a recipe. There are 2 rows of two garlic cloves left on the pan.

   a. Complete the equation below to show how many garlic cloves Mrs. Stern uses.

   10 twos – 2 twos = 8 twos

   b. 20 – 4 = 16

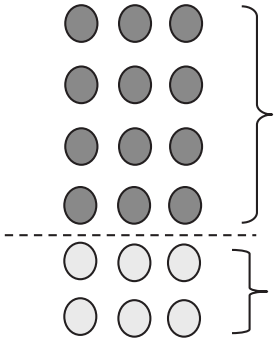
   c. Write an equation to describe the number of garlic cloves Mrs. Stern uses.

   8 × 2 = 16

Be aware that some students may want to use the expression "10 twos – 8 twos = 2 twos". This is also correct, although (b) and (c) will get tricky.

Name _____ Date _____

1. 6 × 3 = 18



(4 × 3) = 12

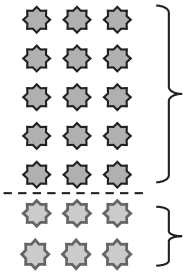
(2 × 3) = 6

(4 × 3) + (2 × 3) = 12 + 6

6 × 3 = 12 + 6

6 × 3 = 18

2. 7 × 3 = _____



(5 × 3) = 15

(2 × 3) = 6

(5 × 3) + (2 × 3) = 15 + 6

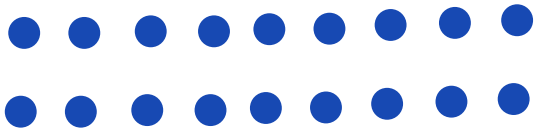
7 × 3 = 15 + 6

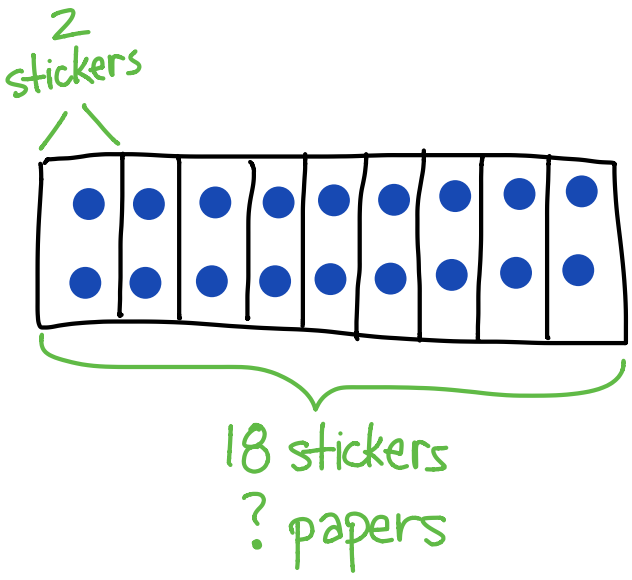
7 × 3 = 21

NOTE: The goal of this lesson is to demonstrate that the distributive property can be used as a strategy for finding the product of two numbers. Be flexible with how students demonstrate this understanding.

Name _____ Date _____

Ms. McCarty has 18 stickers. She puts 2 stickers on each homework paper and has no more left. How many homework papers does she have? Model the problem with both an array and a labeled tape diagram.





She has 9 homework papers.

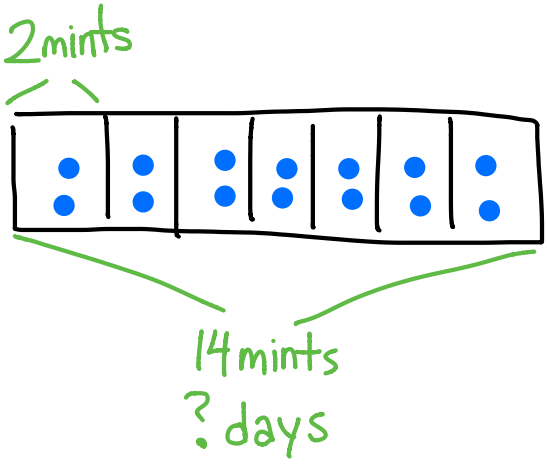
OPTIONAL:

$2 \times 9 = 18$

$18 \div 2 = 9$

Name _____ Date _____

There are 14 mints in 1 box. Cecilia eats 2 mints each day. How many days does it take Cecilia to eat 1 box of mints? Draw and label a tape diagram to solve.



$14 \div 2 = 7$

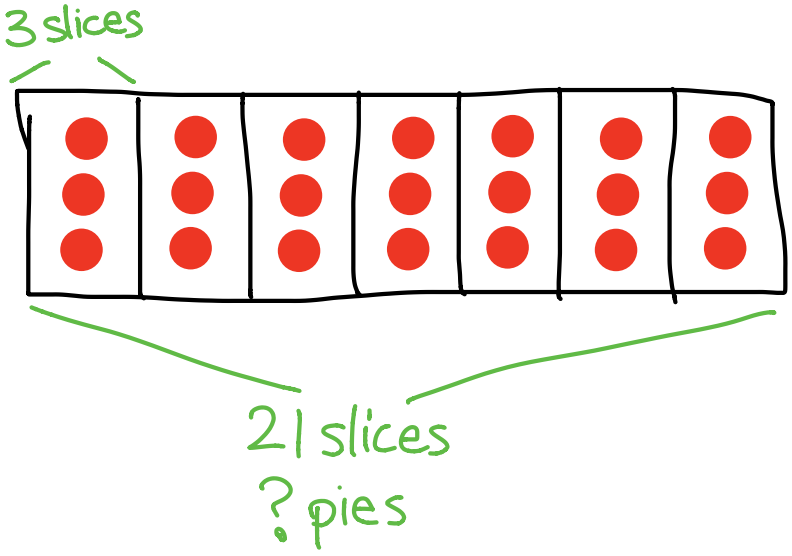
It takes Cecilia 7 days to eat 1 box of mints.

NOTE: The problem above is a quotitive (measurement) type of division. Consider adding a second problem which would be a partitive type. For example . . .

The are 14 mints. Cecilia divides them equally into 2 bowls. How many mints will be in each bowl ?

Name _____ Date _____

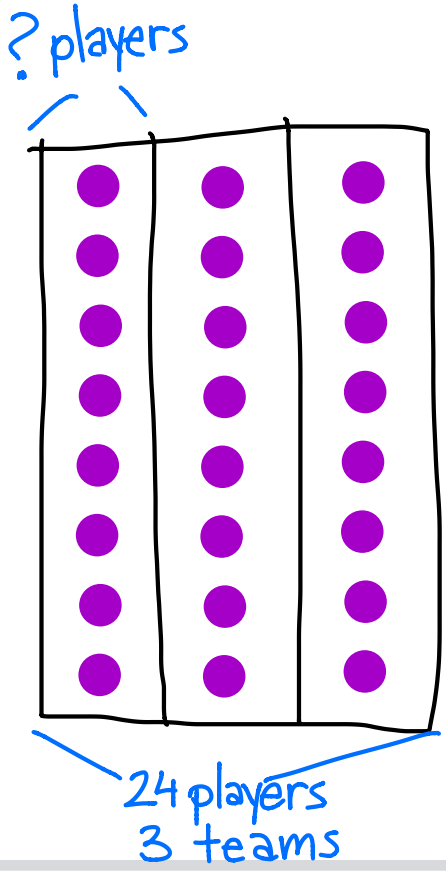
1. Andrea has 21 apple slices. She uses 3 apple slices to decorate 1 pie. How many pies does Andrea make? Draw and label a tape diagram to solve.



$21 \div 3 = 7$

Andrea makes 7 pies.

2. There are 24 soccer players on the field. They form 3 equal teams. How many players are on each team?



$24 \div 3 = 8$

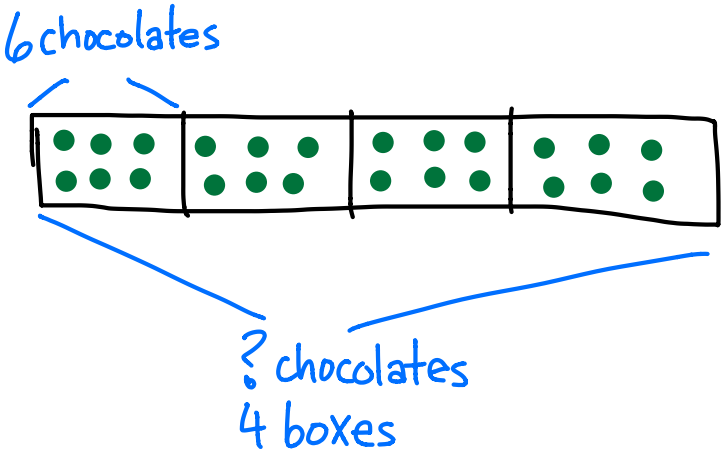
Each team has 8 players.

NOTE: #1 is measurement type because we are given the size of each group.

#2 is partitive because we are given the number of groups.

Name _____ Date _____

Arthur has 4 boxes of chocolates. Each box has 6 chocolates inside. How many chocolates does Arthur have altogether? Draw and label a tape diagram to solve.

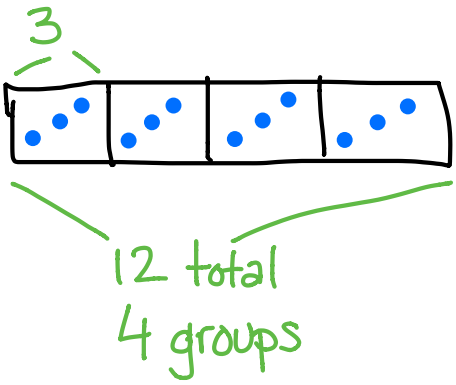


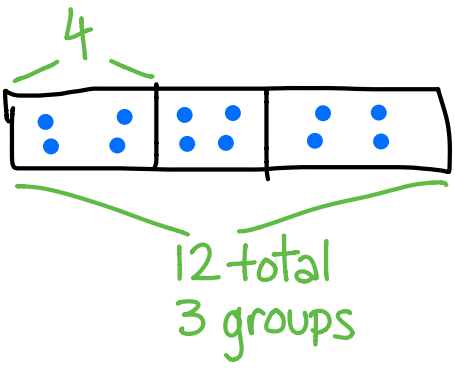
$4 \times 6 = 24$

Arthur has 24 chocolates altogether.

Name _____ Date _____

Draw and label 2 tape diagrams to show that 4 × 3 = 3 × 4. Use your diagrams to explain how you know the statement is true.





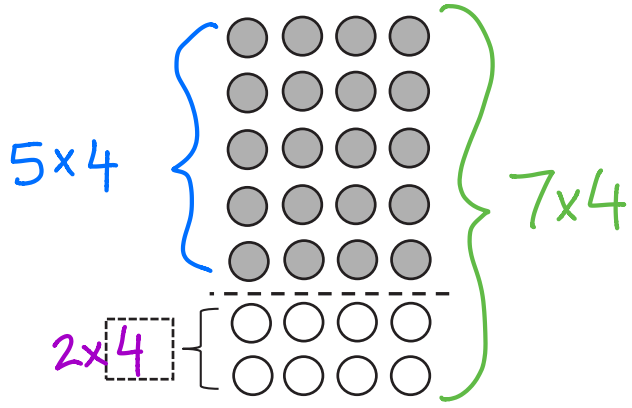
$4 \times 3 = 12$

$3 \times 4 = 12$

Both diagrams show the total is 12. therefor $4 \times 3 = 3 \times 4$.

Name _____ Date _____

Destiny says, "I can use 5 × 4 to find the answer to 7 × 4." Use the array below to explain Destiny's strategy using words and numbers.



We can think of 7x4 as meaning 7 groups of 4. "7 groups" is 5 groups plus 2 groups. So 7 groups of 4 is equal to 5 groups of 4 plus 2 more groups of 4.

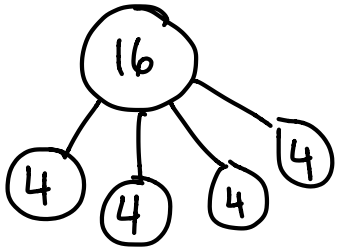
(7 × 4) = (5 × 4) + (2 × 4)

= 20 + 8

= 28

Name _____ Date _____

1. Mr. Thomas organizes 16 binders into stacks of 4. How many stacks does he make? Draw and label a number bond to solve.

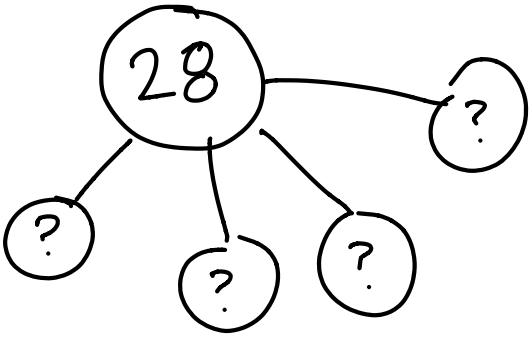


NOTE: This question is better suited for a tape diagram since it is a measurement type. In this case a number bond does not make it easy to use a question mark.

$16 \div 4 = 4$

$4 \times 4 = 16$ Mr. Thomas makes 4 stacks.

2. The chef uses 28 avocados to make 4 batches of guacamole. How many avocados are in 2 batches of guacamole? Draw and label a tape diagram to solve.



NOTE: Since this question is partitive, it is perfect for using a number bond.

$28 \div 4 = 7$ 7 avocados in 1 batch.

$7 \times 2 = 14$

There are 14 avocados in 2 batches.

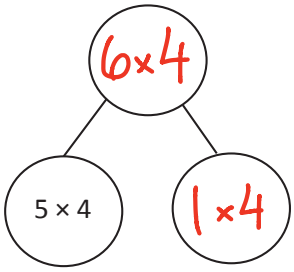
Name _____ Date _____

Dylan used the break apart and distribute strategy to solve a multiplication problem. Look at his work below, write the multiplication problem Dylan solved, and complete the number bond.

Dylan's work:

(5 × 4) + (1 × 4) =

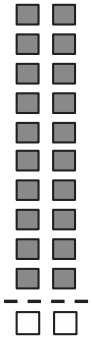
20 + 4 = 24



6 × 4 = 24

Name _____ Date _____

Complete the equations below to solve 22 ÷ 2 = 11.



(20 ÷ 2) = 10

(2 ÷ 2) = 1

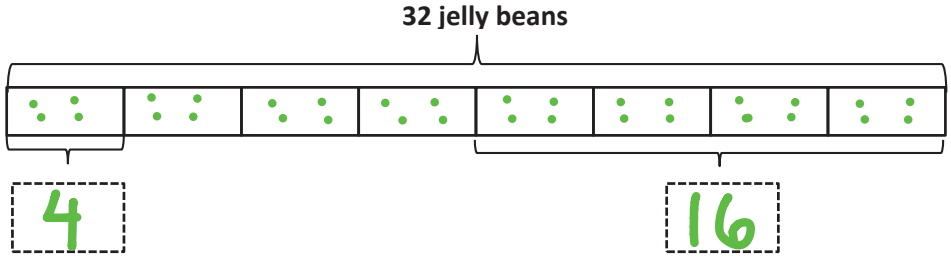
(22 ÷ 2) = (20 ÷ 2) + (2 ÷ 2)

= 10 + 1

= 11

Name _____ Date _____

1. Thirty-two jelly beans are shared by 8 students.



a. How many jelly beans will each student get?

Each student gets 4 jelly beans becase 32÷8=4

b. How many jelly beans will 4 students get?

4 students will get a total of 16 jelly beans because 4×4=16.

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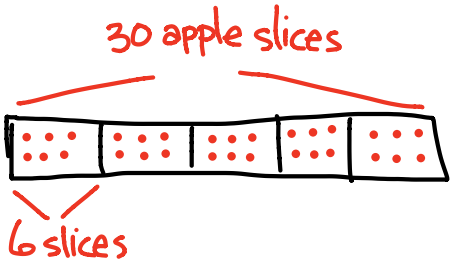
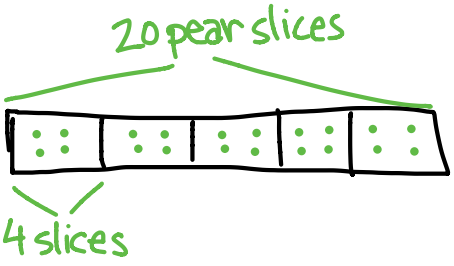
2. The teacher has 30 apple slices and 20 pear slices. Five children equally share all of the fruit slices. How many fruit slices does each child get?

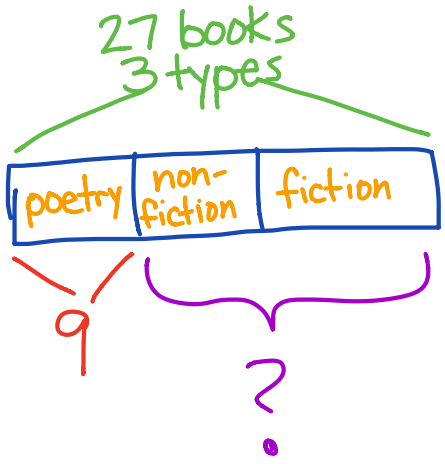




Each child will get 6 apple slices and 4 pear slices for a total of 10 fruit slices.

Name _____ Date _____

Ms. Egeregor buys 27 books for her classroom library. She buys an equal number of fiction, nonfiction, and poetry books. She shelves all of the poetry books first. Draw and label a tape diagram to show how many books Ms. Egeregor has left to shelve.



$27 \div 3 = 9$

9 books of each type.

She has 18 books left to shelve because $2 \times 9 = 18$.