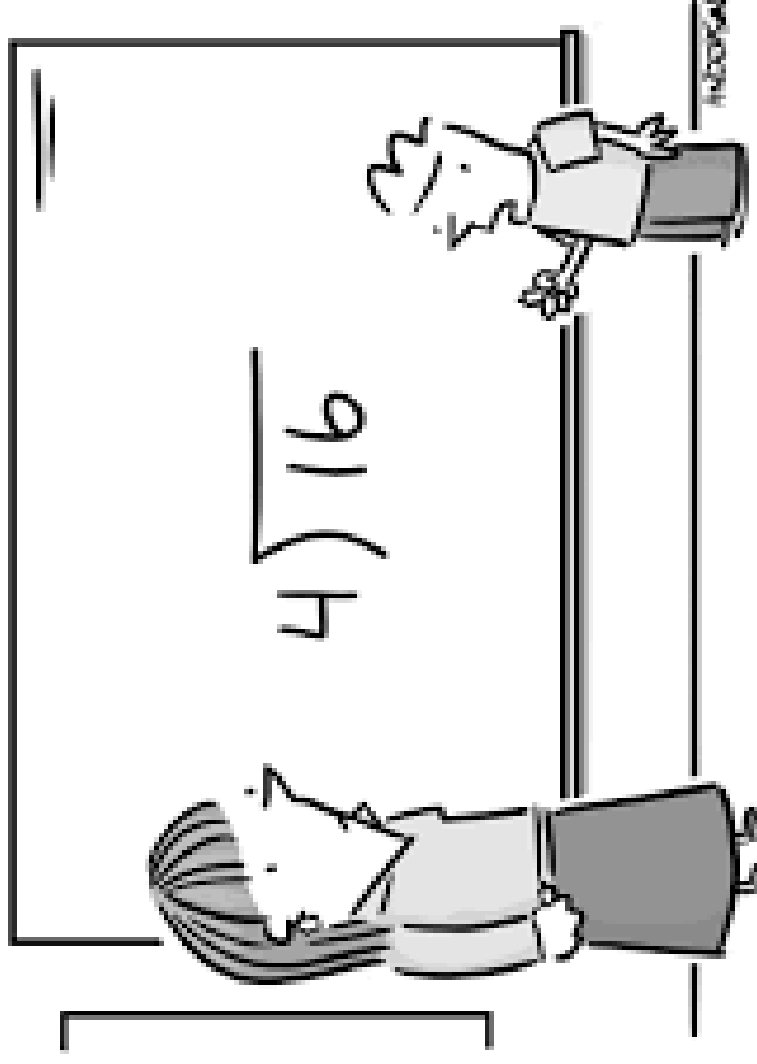


5th Topic 5

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"We've been dividing all week! When do we get to conquer?!"





Group Expectations

- Only 1 marker & 1 eraser per group
- Write the current problem you are working on at the top
 - ALWAYS estimate your answer FIRST when doing operations
- Try not to erase - reorganize as needed
 - Remember “WRONG” thinking can lead to RIGHT
- You can ONLY write someone else’s thinking - NOT your own
 - Make sure everyone has a turn with the marker & turn to think
- EVERYONE must understand so that ANYONE can explain
 - Your goal is NOT to do it the fastest!! Goal is UNDERSTANDING!!
- You may look around the room but you must stay with your group



Tell if the numbers below are divisible by:

2

3

4

5

6

9

10

1) 432

2) 357

3) 2360

4) 5671

5) 38,475

6) Twelve Envelopes Puzzle

7) Open Middle: Divisibility

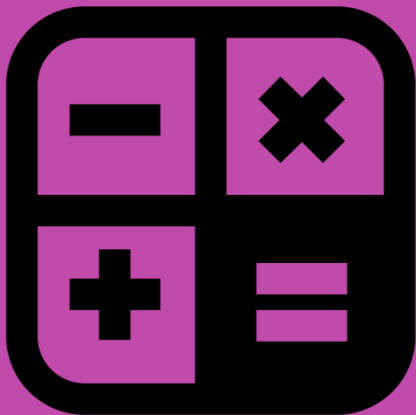
Create a three-digit number using the whole numbers 0-9 more than one time each. Try to create the number divisible by the greatest number of the following factors: 2, 3, 4, 5, 6, 8, 9, and 10.

Can you find the three-digit number divisible by the fewest.



Divisibility

[Answer Key](#)



MATH | I can look for patterns in multiples of numbers.

Check Your Understanding


[Divisibility Rules](#)

[Divisibility Folding Notecatcher](#)

[Divisibility Worksheets](#)

Extension: [Online Basic Fact Practice](#)

If the total is a multiple of 3.
Then you have divisibility.



57 $5+7=12$ YES!

Exit Slip

1) Define and identify the quotients, dividends & divisors in the following problem:

$$36 \div 4 = 9$$



$$7 \overline{)63}$$

1) Using the digits 1-9 at most one time each, fill in the boxes to make a true statement.



3) I am thinking of a number. If I divide it by 3, there is a remainder of 1. If I divide it by 4, there is a remainder of 1. What might the number be.

4) [Remainders Race Game](#)



Basic Division with Remainders

[Answer Key](#)



MATH | I can solve basic division problems with remainders.

Check Your Understanding

[Division Worksheets](#)

Extension: [Online Basic Fact Practice](#)

Exit Slip

1) Talk with your partners. What pattern do you see in the problems below? What is happening to the zeros?

$$63 \div 9 = 7$$

$$630 \div 9 = 70$$

$$6300 \div 9 = 700$$

$$630 \div 90 = 7$$

$$6300 \div 90 = 70$$

$$63,000 \div 90 = 700$$

$$4200 \div 6 = 700$$

$$12,000 \div 40 = 300$$

$$210 \div 70 = 3$$

$$6000 \div 20 = 300$$

$$72,000 \div 90 = 800$$

$$900 \div 300 = 3$$

1) $480 \div 6 = n$

3) $2700 \div 90 = n$

4) $15,000 \div 3 = n$

5)

$$56,000 \div 800 = n$$

6) Discuss. How do you know how many zeroes to place in your answer?

7) Discuss. How might using multiplication help you? How might it help you check your work?

8) Notice what is happening here. Why do these problems not follow the pattern above?

$$40 \div 8 = 5$$

$$400 \div 8 = 50$$

$$4000 \div 8 = 500$$

$$400 \div 80 = 5$$

$$4000 \div 80 = 50$$

$$40,000 \div 80 = 500$$

9) $30,000 \div 50 = n$

10) $10,000 \div 200 = n$

11) Play [Clip & Cover 5-1](#) with your partners. One person solves, one person writes, and one person checks with a calculator. You



Lesson 5-1

[Answer Key](#)



MATH | I can use patterns to find quotients.

Check Your Understanding

Online Practice Buddy 5-1

Page 243 #5-16

Page 244 ALL

Extension: Clip & Cover 5-1

$$42\phi \div 7\phi = 6$$
$$42 \div 7 = 6$$

560

Exit Slip

Estimation the quotients. Round both the divisor, the dividend or both. Remember to look for compatible numbers. Track your answers on your chart.

1) $85 \div 9$

2) $640 \div 11$

3) $234 \div 5$

4) $287 \div 42$

5) $320 \div 11$

6) $208 \div 72$

7) $554 \div 62$

8) $815 \div 23$

9) $2491 \div 48$

10) $412 \div 84$

11) $2964 \div 73$

12) Why is estimating before figuring out the exact answer a good idea?



Lesson 5-2

[Answer Key](#)



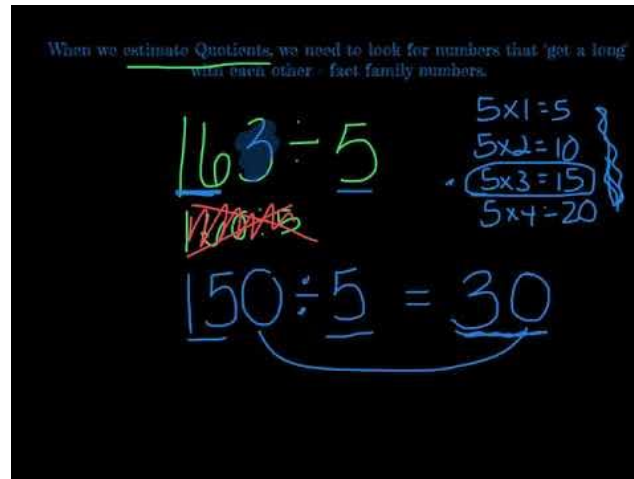
MATH | I can estimate quotients.

Lesson 5-2 Estimate Quotients with 2 Digit Divisors

MJ p. 249 ODD

MJ p. 250 #17, 19, 20, 21

Extension: Clip & Cover 5-1



Exit Slip

Dealing with Remainders

Solve the following problems. Make sure to decide and discuss what you should do with the remainder. Should you:

Split it up

Ignore it

Use it as the answer

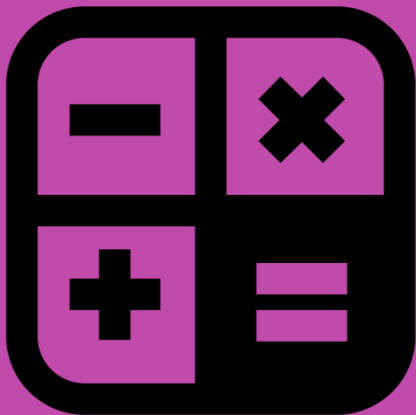
Round up

- 1) Twenty-five fifth graders are going to the Rockies game. Four fifth graders can be seated in one car. How many cars will be needed to get the fifth graders to Fenway Park?
- 2) You are a baseball fanatic. You have \$25 in your pocket. Rockies pennants cost \$4 each. How many pennants can you buy?
- 3) If you buy those pennants, how much money will you have left to put towards a hot dog?
- 4) You decide not to buy the pennants. Who needs six pennants anyway?! You realize you can buy 4 baseballs instead but it will take ALL of your money?
How much does each baseball cost?
 - 1) Your mom has \$23 one-dollar bills and wants to divide all of it up equally between her 5 children. How much money will each receive? (Consider changing the extra dollars for dimes!!)
 - 2) A website has games available for \$5 each. You have \$23. How many games can you buy?
 - 1) A jug holds 5 gallons of water. How many jugs can be filled with 23 gallons?
 - 1) Write a division problem for 31 divided by 4 where you split the leftovers.



Interpret Remainders

[Answer Key](#)



MATH | I can interpret what to do with remainders.

Check Your Understanding

Interpreting Remainders Practice Basic Math Skills p. 69

Extension: Remainders Race

Exit Slip

1) [Open Middle: Multi-Digit Division 1](#)

Using the digits 2-9 at most one time each, place a digit in each box to create two different whole number quotients: one that is greater than 300 and one that is less than 300. You may reuse all the digits for each quotient.

A division problem template consisting of three dashed boxes for the dividend, a division symbol (\div), and one dashed box for the quotient.

2) Task Cards with team Option: [Holiday Cupcakes Practice](#)

One person solves, one person writes, and one person checks with the computer (need QR Code Reader to check)



Division

[Answer Key](#)



MATH | I can find the quotients with one-digit divisors.

Check Your Understanding

[Division Worksheet](#)

Extension: 4th Clip & Cover 5-9 OR [Division Four-in-a-Row](#) OR [Moving Remainders](#)



<https://www.youtube.com/watch?v=CcGB39f66RY>

Exit Slip

This is the standard algorithm to solve $249 \div 20$. What do you notice?

Step 1:

$$\begin{array}{r} 1 \\ 20 \overline{)249} \\ \underline{-20} \\ 4 \end{array}$$

Divide $24 \div 20$
Multiply 1×20
Subtract $24 - 20$
Compare $4 < 20$

Step 2:

$$\begin{array}{r} 12 \text{ R}9 \\ 20 \overline{)249} \\ \underline{-20} \\ 49 \\ \underline{-40} \\ 9 \end{array}$$

Divide $49 \div 20$
Multiply 2×20
Subtract $49 - 40$

Part of the challenge with this method is knowing where to begin your division. On the following problems, where would your first digit go when you begin dividing?

$$\begin{array}{r} \square \square \square \square \\ 16 \overline{)3,418} \end{array}$$

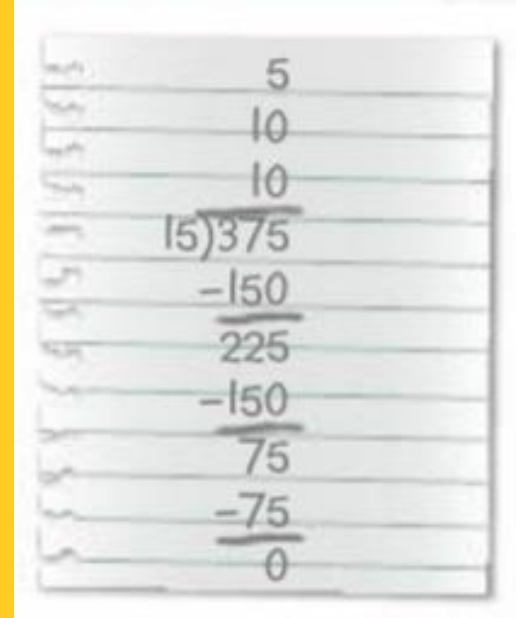
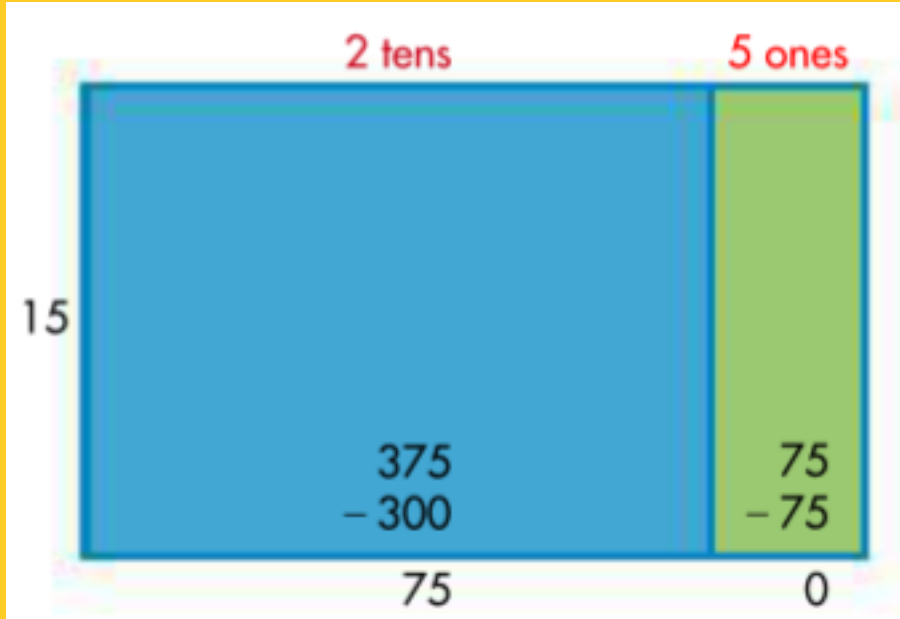
$$7. \begin{array}{r} \square \square \square \square \\ 50 \overline{)1,577} \end{array}$$

$$8. \begin{array}{r} \square \square \square \square \\ 24 \overline{)8,045} \end{array}$$



Turn in your books to page 265 & let's try some problems...

Another option are these two methods using partial quotients to solve $375 \div 15$ are below. What do you notice?



Now let's try a couple...

$132 \div 11$

$840 \div 21$

$660 \div 30$

$575 \div 25$

Lesson 5-5

[Answer Key](#)



MATH | I can divide when the divisor is a multiple of 10.

Check Your Understanding

MJ p. 267 #3-8

MJ p. 268 #10, 11, 13

Extension: Division Four in a Row Game

LONG DIVISION RAP

(NEVER GIVE UP)

D-VILLAIN



Exit Slip

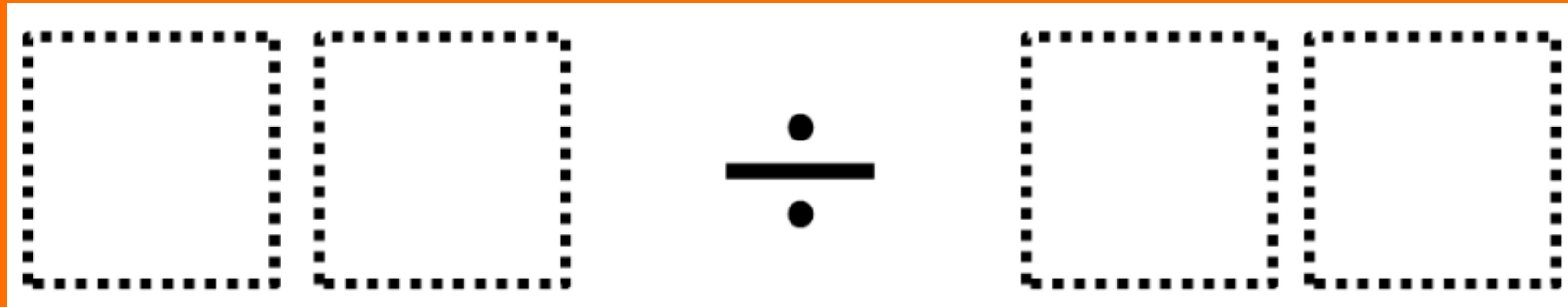
1) Division Showdown

Solve the problems with your partners. One will solve, one will write, and one will check the answers.

1) Open Middle: Dividing Two-Digit Numbers (Elementary)

Make the smallest whole number quotient (no remainders) by filling in the boxes using the whole numbers 1-9 no more than one time each.

Make the largest quotient the same way.



Lesson 5-7

[Answer Key](#)



MATH | I can find quotients using 2-digit divisors.

Check Your Understanding

[Page 277 & 278 Worksheet](#)

Extension: Toss & Talk 5-4

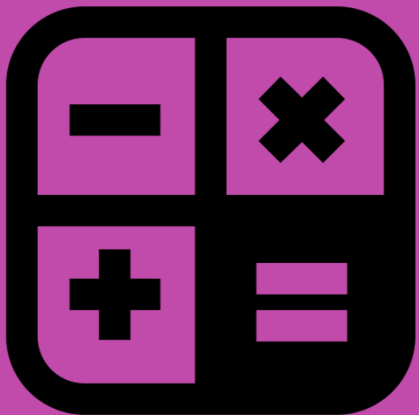


<https://www.youtube.com/watch?v=7QXMwftxx98>

Exit Slip

Lesson 5-8

[Answer Key](#)



MATH | I can decipher between multiplication and division in whole number story problems.

Check Your Understanding

[Numberless Word Problems & Answers](#)
[Numberless Word Problems Recording Sheet](#)
[5-8 Story Problems](#)

Extension: Any activity from this topic



Review

MATH | I can do my best to review for the test

Review for Test

Reteach Pages 289-292

