

5th Grade Math

Week of April 12 - April 16, 2021



Name _____

* Please do not complete until advised by teacher*

Find each quotient. Draw a picture to help.

1. $\frac{1}{3} \div 6$

2. $4 \div \frac{1}{2}$

3. Benjamin is making bow ties. How many $\frac{1}{2}$ -yard-long bow ties can he make if he has 18 feet of fabric?

A. $\frac{1}{9}$

B. $\frac{1}{36}$

C. 36

D. 9

Additional Practice 9-8 Repeated Reasoning

Another Look!

Study each set of problems. Then make a generalization about each set.

Set A

$$\frac{1}{4} \div 6 = \frac{1}{24} \quad \frac{1}{4} \times \frac{1}{6} = \frac{1}{24}$$

$$\frac{1}{3} \div 5 = \frac{1}{15} \quad \frac{1}{3} \times \frac{1}{5} = \frac{1}{15}$$

Set B

$$6 \div \frac{1}{4} = 24 \quad 6 \times 4 = 24$$

$$5 \div \frac{1}{3} = 15 \quad 5 \times 3 = 15$$



Generalizing can help you find general methods for solving division problems involving unit fractions and whole numbers.

Set A

$$\frac{1}{4} \div 6 = \frac{1}{4} \times \frac{1}{6}$$

$$\frac{1}{3} \div 5 = \frac{1}{3} \times \frac{1}{5}$$

Generalization:

Dividing a unit fraction by a whole number other than zero is the same as multiplying the unit fraction by a unit fraction with the whole number as the denominator.

Set B

$$6 \div \frac{1}{4} = 6 \times 4$$

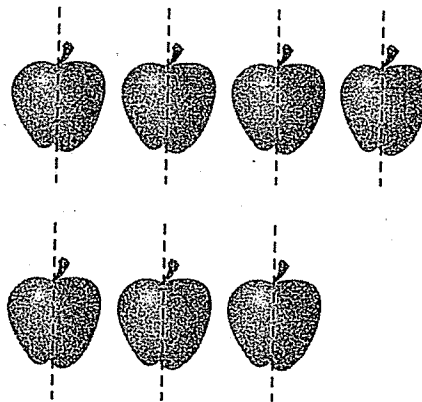
$$5 \div \frac{1}{3} = 5 \times 3$$

Generalization:

Dividing a whole number by a unit fraction is the same as multiplying a whole number by the denominator of the unit fraction.

Mrs. Miller brought 7 apples to a picnic. She cut each apple in half. How many pieces did she wind up with?

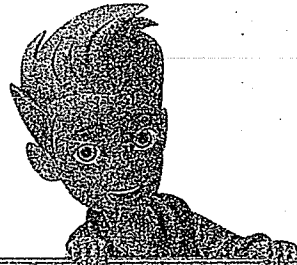
- Write and solve a division equation to find the total number of apple pieces. Explain your reasoning.



- Suppose Mrs. Miller decided to cut each apple into fourths rather than into halves. Find how many apple pieces she would have then. Can you repeat the method you used in Exercise 1 to solve this problem? Explain.
- When you divide a whole number by a unit fraction, how does the quotient compare to the whole number? Explain.

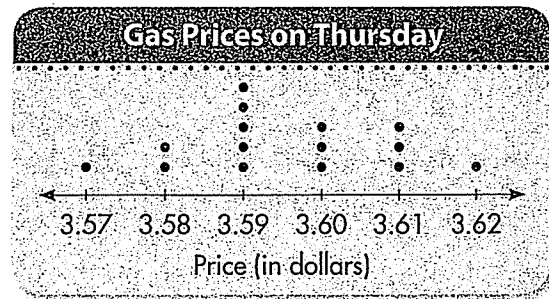
In 5–8, use the data set and line plot.

- On Thursday, Cole collected data on the gas prices at different gas stations. How many gas stations are in Cole's data set?
- Which gas price occurred most often?
- Cole bought 10 gallons of gas at the gas station with the lowest price. He paid with two \$20 bills. Write and solve an equation to find his change.
- Steve bought 10 gallons of gas at the gas station with the highest price. How much more than Cole did he pay for gas?



Prices of One Gallon of Gas on Thursday (in dollars)

3.61	3.60	3.59	3.58	3.59
3.59	3.60	3.61	3.62	3.61
3.58	3.57	3.59	3.60	3.59



- Be Precise** Mrs. Dugan plans to serve 100 barbecue sandwiches at the company picnic. How many packages of barbecue buns will she need if buns come in packages of 8? Packages of 12?

- Algebra** Janet had \$9.25 this morning. She spent \$4.50 for lunch, and then spent \$3.50 on school supplies. Write and solve an equation to find m , the amount of money Janet had left at the end of the day.

Assessment Practice

- Use the line plot at the right. How much older is the oldest player than the youngest player?

- (A) $\frac{1}{2}$ year
- (B) $1\frac{1}{2}$ years
- (C) 2 years
- (D) 11 years



Tuesday, 4/13/21

Exit Ticket Review Topic 9

Find each quotient. Use a diagram or number line to help.

1. $2 \div \frac{1}{8}$

2. $\frac{1}{2} \div 4$

3. During a hike, 4 friends share $\frac{1}{2}$ pound of trail mix. What amount of trail mix will each friend receive?

a. $\frac{1}{8}$

b. $\frac{4}{2}$

c. $4\frac{1}{2}$

d. 8

Wednesday, 4/14/21

Exit Ticket Review Topic 9

1. Debbie cut a cord into sixths. She used 5 of the pieces to make necklaces. She used equal amounts of the remaining cord to make four bracelets. What fraction of the original cord did Debbie use to make bracelets?

Topic 9 Assessment

Name _____

Date _____

1. What expression is equivalent to $\frac{3}{5}$?

- a. 3×5
- b. $3 + 5$
- c. $3 \div 5$
- d. $3 - 5$

2. Mr. Hinkley owns 83 acres of land. He divides the land into eight equal sections to sell to eight buyers. Which phrase best describes how much land, in acres, each buyer will receive?

- a. more than 9 and less than 10
- b. more than 10 and less than 11
- c. more than 11 and less than 12
- d. more than 12 and less than 13

3. A box contains 512 grams of cereal. One serving of cereal is 56 grams. How many servings of cereal does the box contain?

- a. $9\frac{1}{4}$
- b. $9\frac{1}{8}$
- c. $9\frac{8}{56}$
- d. $9\frac{8}{512}$

4. Jack puts $\frac{1}{3}$ pound of birdseed into his bird feeder every time he fills it. How many times can Jack fill his bird feeder with 4 pounds of birdseed?

- a. $1\frac{1}{3}$
- b. $3\frac{2}{3}$
- c. 11
- d. 12

5. What is the value of the expression $\frac{1}{7} \div 5$?

- a. $\frac{1}{12}$
- b. $\frac{1}{35}$
- c. $\frac{5}{7}$
- d. $\frac{6}{7}$

6. What situation could the expression $\frac{1}{4} \div 3$ represent?

- a. $\frac{1}{4}$ of a package of pencils shared equally among three friends
- b. the number of $\frac{1}{4}$ -cup servings in three cups of popcorn
- c. $\frac{1}{3}$ of a stadium split into four equal sections
- d. a four-foot-long rope cut into $\frac{1}{3}$ -foot pieces

7. How many $\frac{1}{3}$ -cup servings are in 4 cups?

- a. $\frac{1}{12}$
- b. $\frac{3}{4}$
- c. 4
- d. 12

8. During a hike, 5 friends share $\frac{1}{2}$ pound of trail mix. What amount of trail mix will each friend receive?

- a. $\frac{1}{10}$
- b. $\frac{5}{2}$
- c. $5\frac{1}{2}$
- d. 10

9. What is the value of the expression $\frac{1}{5} \div 4$?

- a. $\frac{20}{1}$
- b. $\frac{5}{4}$
- c. $\frac{4}{5}$
- d. $\frac{1}{20}$

10. Mani, James, and Isidro equally share $\frac{1}{2}$ of a pie. What fraction of the original pie did each of them receive?

a. $\frac{1}{6}$

b. $\frac{1}{5}$

c. $\frac{2}{3}$

d. $\frac{3}{2}$

2 point each

11. Four classmates were asked to decorate $\frac{1}{5}$ of the bulletin board in a classroom. They divided the section to be decorated equally among the 4 classmates. What fraction of the entire bulletin board did each classmate decorate?

Show your work below. Answer: _____

12. There are 5 cups of oatmeal in a container. Stella eats $\frac{1}{3}$ cup of the oatmeal every day for breakfast. In how many days will Stella finish all the oatmeal in the container?

Show your work below. Answer: _____

Standards Review

Lesson 7

Domain: Number and Operations in Base Ten

Cluster: Understand the place value system.

Standards: Primary 5.NBT.2; Secondary 5.NBT.1

Background Information:

Since sizes of objects and distances in space are so great, powers of 10 are often used to represent these measures.

Object	Approximate Diameter (in miles)	Approximate Distance from the Sun (in miles)
Mercury	3.0×10^3	36,000,000
Venus	7.5×10^3	67,000,000
Earth	8.0×10^3	93,000,000
Mars	4.2×10^3	140,000,000
Jupiter	8.9×10^4	480,000,000
Saturn	7.5×10^4	890,000,000
Uranus	3.2×10^4	1,800,000,000
Neptune	3.1×10^4	2,800,000,000
Sun	8.6×10^5	0

STEP 4 **SOLVE:** *Solve the problem.*

Sun: $8.6 \times 10^5 = 860,000$ miles

Mars: $4.2 \times 10^3 = 4,200$ miles

Saturn: $7.5 \times 10^4 = 75,000$ miles

Ordered least to greatest: 4,200 miles, 75,000 miles, 860,000 miles

Move the decimal digits to the left the same number of places as the exponent because it represents the number of times the decimal is multiplied by 10.

STEP 5 **CHECK and JUSTIFY:** *Check and justify your answer.*

Check your answer by working backwards. Convert your answer written in standard form back to forms with a power to 10.

$$860,000 = 8.6 \times 10^5$$

$$4,200 = 4.2 \times 10^3$$

$$75,000 = 7.5 \times 10^4$$

Independent Practice

2 Write Earth's, Jupiter's, and Neptune's distances from the Sun as a product of a power of 10 and a decimal with digits in the ones and tenths places. Did you have to count the zeros in each number? Explain how this helped you.

3 In 2020, the *Voyager 1* spacecraft is expected to be about 10^2 as far from the Sun as the Earth, plus another 3.1×10^9 miles. About how far will *Voyager 1* be from the Sun in 2020? Write your answer in standard form.

7 Barnard's star is about 36×10^{12} miles from the Sun.

Part A Write the distance of Mercury from the Sun as the product of a power of ten and a two-digit whole number. Did counting the number of zeros help you get your answer? Explain how this helped you.

Part B About how many times greater is the distance of Barnard's star from the Sun than Mercury's distance from the Sun? Write your answer as a power of 10.

Lesson 8

Domain: Number and Operations in Base Ten
Cluster: Understand the place value system.
Standards: Primary 5.NBT.3a, 5.NBT.3b

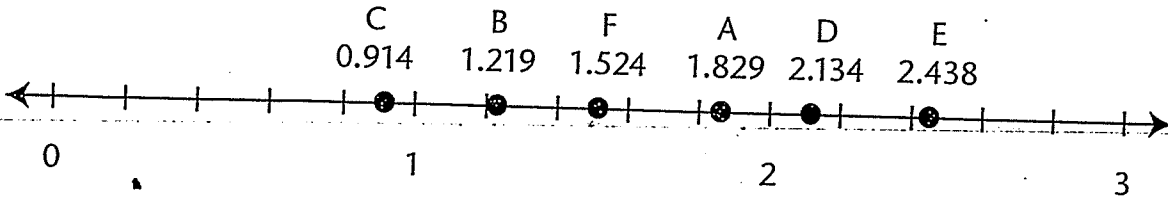
Background Information:

Manny is making improvements to his backyard. He plans to build many things, such as a fence and a tree house. He bought 6 different sizes of scrap wood planks. Since the planks were used to make specialized furniture, they had been measured to the nearest thousandth of a meter. The chart below shows the different sizes Manny bought.

Plank	Length (in meters)	Width (in meters)
A	one and eight hundred twenty-nine thousandths	seventy-six thousandths
B	1.219	0.229
C	nine hundred fourteen thousandths	three hundred eighty-one thousandths
D	$2 + \frac{1}{10} + \frac{3}{100} + \frac{4}{1,000}$	$\frac{1}{10} + \frac{1}{1,000}$
E	2.438	0.152
F	$1 + \frac{5}{10} + \frac{2}{100} + \frac{4}{1,000}$	$\frac{3}{10} + \frac{1}{100} + \frac{5}{1,000}$

STEP 5 CHECK and JUSTIFY: *Check and justify your answer.*

Check your answer by graphing the length of each plank on a number line. The planks that are the 4th and 6th farthest away from zero are the 4th and 6th longest planks.



1. While working, Manny asked his daughter to get him the first and second longest planks. Which planks should she get? Write these lengths in word form in order from least to greatest.

2. Before he started working on the gate, Manny ordered the planks by width from greatest to least. Write in expanded form the widths of the planks from greatest to least.

3. Before he started working on the fence, Manny ordered the planks by length from least to greatest. Write in standard form the lengths of the planks from least to greatest.

Lesson 9

Domain: Number and Operations in Base Ten

Cluster: Understand the place value system.

Standards: Primary 5.NBT.4; Secondary 5.NBT.6, 5.NBT.7, 5.NBT.3b

Background Information:

A local charity is holding a fundraiser. All of the money raised will be donated to the charity.

Modeled Instruction

Mr. Westerskov makes custom electric guitars. He donates one to be sold at the fundraiser. He includes 3 custom picks with the guitar. Mr. Westerskov describes all of his picks by their thickness using the table below. He rounds the thickness to the nearest thousandth.

Description	Thickness (in inches)
Extra Light	≤ 0.017
Light	0.018 to 0.027
Medium	0.028 to 0.033
Heavy	0.034 to 0.047
Extra Heavy	≥ 0.048

Part B What is the description of the pick that came from a factory with a thickness measurement of 0.0474 inch?

Solution:

You can use the 5-Step Method to solve this problem:

STEP 1 IDENTIFY: *What are you being asked to find?*

You are being asked to give the description of a guitar pick with a thickness of 0.0474 inch.

STEP 2 FIND: *What do you need to solve the problem?*

You need the table on page 69, which shows the range of thickness for each type of pick.

STEP 3 CHOOSE: *How will you solve the problem?*

First, round 0.0474 to the nearest thousandth.

Then look at the values in the table to determine which range this number falls into.

STEP 4 SOLVE: *Solve the problem.*

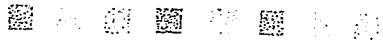
A pick that is 0.0474 inch rounds to 0.047 inch. This falls in the range for a heavy pick.

STEP 5 CHECK and JUSTIFY: *Check and justify your answer.*

Check your answer by writing the range for a heavy pick in the ten-thousandths.

Heavy: 0.0340 to 0.0470

0.0474 rounds to a number in this range.



Part B Mrs. Stanton buys 12 footballs. She writes a check for an amount rounded to the nearest tenth. How much more does Mrs. Stanton pay than the total cost of the footballs?

Part C Seven people split the cost of 1 dinner package. Each of the 7 people paid the same amount. If each person's cost was rounded to the nearest hundredth, how much more was paid than the purchase price?

7 Four friends want to share the cost of a pass to a beach park. The pass costs \$15.78. About how much will each friend pay? Round your answer to the nearest cent.

- A \$3.45
- B \$3.46
- C \$3.94
- D \$3.95

Enrichment

Enrichment

