

# Summer Math Program Fifth Grade Week 1



#### Fast Facts

See how many you can do in one minute!

#### **Decimals and Fractions**

- 1. Nancy ate 1/3 of a pizza and Gabe ate 1/4 of the pizza. How much of the whole pizza is left?

  - D.
- 2. Choose the correct answer for this problem:
  - A.
  - B.
  - C.
  - D.

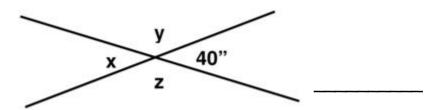
#### **Problem Solving**

1. Andrew's family is going on vacation across the United States. They traveled 515 miles every day for 17 days. How many miles did they travel in all? Explain your answer.

Work Space	Explanation	

#### Geometry Time

1. What is the measure of angle y? (Do NOT use a protractor to find your answer.)



2. Skip reads the juice bottle label and finds that it contains 1.89 liters of juice. His cup only holds 240 milliliters so he wants to convert 1.89 liters to milliliters. The bottle contains how many milliliters?

#### **Number Operations**

- 1. Find the prime factorization for the number 48 expressed in exponential notation.
  - a.  $31 \times 24$
  - b. 6 x 81
  - c.  $3 \times 24 \times 4$
  - d. 3 x 22 x 4

#### **Web Links**

- Math Magician Games (math fluency)
   <a href="http://resources.oswego.org/games/mathmagician/cathymath.html">http://resources.oswego.org/games/mathmagician/cathymath.html</a>
- EduPlace Math eGames Math Lingo (math vocabulary)
   <a href="http://www.eduplace.com/kids/mw/swfs/mathlingo\_grade5.html">http://www.eduplace.com/kids/mw/swfs/mathlingo\_grade5.html</a>



#### Fast Facts

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#### **Decimals and Fractions**

- 1. Which point on the number line below best represents 1.75?
  - a. Point A
  - b. Point B
  - c. Point C
  - d. Point D
- Α В C D 0 1

0

2. Choose the equation that is NOT true.

a. 
$$\frac{1}{2} + \frac{3}{8} = \frac{7}{8}$$

b. 
$$\frac{1}{6} + \frac{5}{12} = \frac{7}{12}$$

c. 
$$\frac{3}{10} - \frac{23}{100} = \frac{7}{100}$$

$$\frac{8}{10} - \frac{3}{5} = \frac{2}{5}$$

- 3. Place these two fractions on the two number lines below to show why they are equivalent.

1 0

2

#### Factors and Multiples

1. I am a factor of 36 and a m	nultiple of 3. What number am I?
2. My number is a multiple of number?	5. It is less than 100 and has a factor of 6. What is my
	Problem Solving
1. There are 168 lunches to be lunches will go to each class?	e shared equally among 3 fourth-grade classes. How many Explain your answer.
Work Space	Explanation
	Geometry Time
1. Which geometric figure is s	shown here?

## **Web Links**

- Cash out (making change game)
   <a href="http://www.mrnussbaum.com/cashout/index.html">http://www.mrnussbaum.com/cashout/index.html</a>
- Raceway Number Values
   http://www.abcya.com/comparing\_number\_values.htm





#### Fast Facts

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## **Fractions and Decimals**

1. Complete each table.

Division	Improper Fraction	Mixed Number
18 ÷ 4	<u>18</u> 4	
20 ÷ 3		$6\frac{2}{3}$
	<u>12</u> 5	

Division	Improper Fraction	Mixed Number
	<u>23</u> 6	
		5 <del>1</del> 6
15 ÷ 5		

2. Write the following fractions in order from least to greatest:

$$\frac{11}{3}$$

$$\frac{11}{3}$$
  $\frac{1}{6}$   $1\frac{2}{3}$ 

3. Write the following fractions in order from greatest to least.

$$1\frac{1}{4}$$

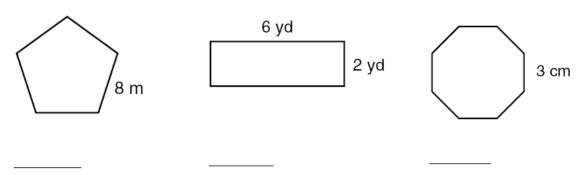
$$\frac{3}{4}$$

#### Area and Perimeter

1. Christina had a rectangular garden with a perimeter of 36 feet. The fence surrounding it was falling down on one of the short sides (width). If the length of the garden was 10 feet, how many feet of fence did she need to replace the broken portion (width) of the fence?

Width = ? ft.	Perimeter = 36 ft.	
	Length = 10 ft.	

2. Find the perimeter of each polygon.



#### **Problem Solving**

1. Paper is delivered in cartons of 48 packs of paper each. If the store orders 624 packs of paper, how many cartons will they receive? Explain your answer.

Work Space	Explanation

#### **Web Links**

- Math Playground Grand Slam Word Problems
   http://www.mathplayground.com/GrandSlamMath2.html
- EduPlace Brain Teasers
   http://www.eduplace.com/kids/mw/bt/bt\_4.html

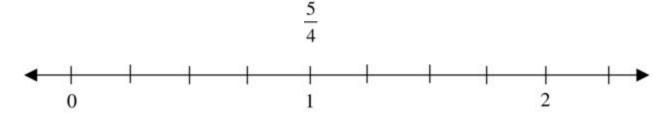


#### Fast Facts

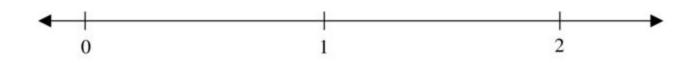
See how many you can do in one minute!

#### **Fractions and Decimals**

- 1. Which number is an improper fraction?
  - a.  $\frac{11}{12}$
  - b. §
  - c. 5
  - d. 7
- 2. Locate and label this fraction on the number line. Then write it as a mixed number:



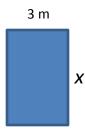
3. Write a mixed number between 0 and 2. Show where it is on the number line. Then write an improper fraction that is equivalent to the mixed number.



#### Area and Perimeter

Find the missing side when the perimeter or area is given.

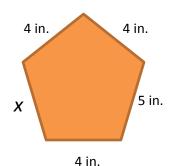
1.



Area =  $30 \text{ m}^2$ 



2.



Perimeter = 22 in.



2. The perimeter of a regular octagon is 32 in. What is the length of one side of the octagon?

- a. 32 in.
- b. 8 in.
- c. 24 in.
- d. 4 in.

3. A rectangular lawn is 45 feet long and 30 yards wide. Find the perimeter in feet. Then find the perimeter in yards.

<del></del>	<del></del>	<del></del>	<del></del>

#### **Factors and Numbers**

- 1. Which of the following is NOT true about prime numbers?
  - a. They have exactly two factors
  - b. One is a factor of every prime number
  - c. No prime numbers end in zero
  - d. All prime numbers are odd numbers.

#### **Web Links**

- Lemonade Stand interactive site with economics in mind http://www.lemonadestands.com/
- Double Digit Multiplication Game
   http://www.mathplayground.com/multiplication05.html





#### Fast Facts

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#### **Fractions and Decimals**

1. The distance from home to school is 7/8 of a mile for Amy and 4/8 of a mile for Tom. How much farther does Amy walk than Tom?

2. Solve the following problems:

$$\frac{3}{4} + \frac{2}{4} =$$

$$\frac{3}{4} - \frac{2}{4} =$$

$$\frac{8}{12} - \frac{1}{4} =$$

$$\frac{3}{4} + \frac{2}{4} = \frac{3}{4} - \frac{2}{4} = \frac{8}{12} - \frac{1}{4} = \frac{8}{12} + \frac{1}{4} = \frac{1}{12} + \frac{1}{4} = \frac{1}{12}$$

3. Solve for the unknown in this equation:

$$\frac{2}{4} + n = \frac{3}{4}$$
  $n =$ 

4. Add or subtract these decimals:

#### **Place Value**

Answer the following questions about place value. Use the Place Value Chart to assist you if needed.

#### Place Value Chart

Bil	lions		Mil	Millions			Thousands			Ones		
Hundreds	Tens	Ones	Hundreds	Tens	Ones	Hundreds Tens Ones		Hundreds Tens On		Ones		

Write each number in short word form.

Write each number in standard form.



Write each number in expanded form.

3. 463 million, 342 thousand, 705

Write each number in word	form.	
<b>4.</b> 715,413,068		
Write the place of the 2 in 6	each number. Then write its	value.
<b>5.</b> 21,547	<b>6.</b> 54,285	<b>7.</b> 67,902
Compare. Write $>$ , $<$ , or $=$ for	or each ○.	
<b>1.</b> 3,471 $\bigcirc$ 3,452	<b>2.</b> 40,283 $\bigcirc$ 40,567	<b>3.</b> 1,042,639 $\bigcirc$ 1,042,639
<b>4.</b> 67,452,105 $\bigcirc$ 76,021	<b>5.</b> 201,000,0	01 $\bigcirc$ 201,002,799

#### **Web Links**

- Extra practice for place value and addition/subtraction http://www.eduplace.com/kids/mw/practice/5/ep5\_01.html
- Escape from Fraction Manor http://www.mathplayground.com/HauntedFractions/HFGameLoader.html





#### Fast Facts

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#### **Dazzling Decimals**

Add or subtract.

16. Alan lives 2.48 kilometers from school. Warren lives 3.19 kilometers from school. How much farther from school does Warren live?

#### **Excellent Estimates**

Round each number to the nearest ten. Then estimate.

Estimate each product.

**9.** 
$$34 \times 19 =$$

9. 
$$34 \times 19 =$$
 \_\_\_\_\_ 10.  $58 \times 4{,}130 =$  \_\_\_\_\_ 11.  $24 \times 78 =$  \_\_\_\_\_

**11.** 
$$24 \times 78 =$$
 \_\_\_\_\_

Use the following Bake Sale table and information to solve. Tell whether you need an exact or an estimate for your answer.

The Hillsboro Elementary School had a bake sale to raise money for their class trip. The table shows how many of each item were sold.

- 1. Were there more than 400 items sold at the bake sale?
- 2. How many brownies and cookies were sold altogether?
- 3. The students earned \$214 selling muffins and \$127.50 selling banana bread. About how much money is that?
- 4. The students raised a total of \$628.50 with this bake sale. About how much more do they need to reach their goal of \$1,500?

Bake Sale					
Item	Number Sold				
Brownies	76				
Cookies	135				
Muffins	107				
Banana Bread	85				

#### **Web Links**

Try these web sites for additional practice and interactive learning!

- Extra practice for probability/algebra and graphing
   http://www.eduplace.com/kids/mw/practice/4/ep4\_08.html
- Alien Angles
   http://www.mathplayground.com/alienangles.html

#### **Exciting Extras**

The following resources are to help your mathematician with fractions and math fluency. Please use the fraction strips (last page) to compare fractions (e.g.,  $\frac{3}{4}$  is bigger than  $\frac{1}{2}$  but smaller than 5/6), find equivalent fractions (e.g., 5/10 is equal to  $\frac{1}{2}$  which is equal to 3/6), and for familiarity with how big or little fractions are relative to one whole. The link below takes you to a website for age-appropriate flashcards you can print and use to practice math fluency. Enjoy!!

http://www.helpingwithmath.com/resources/oth\_flashcards.htm

# **Fraction Strips**

1 Whole											
		- 1	<u>l</u>			1 2					
	-	<u>1</u> 3				$\frac{1}{3}$ $\frac{1}{3}$					
	1 4			1 4			1 4			1 4	-
_	<u>1</u> 5		1 5		1	1 <u>1</u> <u>5</u> <u>5</u>			<u>1</u> 5		
<u>1</u>	_	-	<u> </u>	-	1 6		<u>-</u>	-	<u> </u> 		1 6
<u>1</u> 8		1 8	1 8	-	<u>1</u>	<u>1</u>	.   .	1 8	<u>1</u>	-	1 8
1 10	10	<u> </u>	<u> </u>	1 10	1 10	1 10	1 10	$\overline{0}$	0	1 10	1 10
<u>1</u> 12	1 12	1 12	1 12	1 12	1 12	<u>1</u> 12	1 12	1 12	1 12	1 12	1 12





#### Fast Facts

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#### Fractions & Decimals

1. On the strips below, shade and label the following fractions:

- 2. How many twelfths is equal to five-sixths?
- 3. How many eighths is equal to one-fourth?
- 4. Explain the relationship between eighths and fourths. Draw a picture to aid your explanation.

5.	. How is thirteen hundredths written in standard form?
6.	. Which number is the same as one fourth?
	a. 0.4 b. 0.04 c. 0.25 d. 0.75
7.	. Which number is the same as 0.5?
	<ul> <li>a. one half</li> <li>b. 5/1</li> <li>c. five hundredths</li> <li>d. 5/1000</li> </ul>
8.	. Write one-tenth and one-hundredth in decimal form
	Marvelous Multiples
	A <i>multiple</i> is the product of two integers. To find the multiples of a certain number, multiply that number by every integer, starting with 1. <i>Example:</i> Multiples of 10 are 10, 20, 30, 40, 50, and so on.
Fi	ind multiples of each number by filling in the circles.
1.	Multiples of 4
2.	. Multiples of 6
3.	. Multiples of 8
4.	. Multiples of 9

#### Answer the following questions about factors and multiples.

- 1. Which of the following numbers is a multiple of 8?
  - a. 18
  - b. 28
  - c. 44
  - d. 56
- 2. The following are all multiples of a one-digit number: 12, 24, 30, 42. Identify the one-digit factor common to each multiple.
  - a. 5
  - b. 6
  - c. 7
  - d. 8
- 3. Which of the following sets of numbers are all multiples of 7?
  - a. 35, 47, 52
  - b. 35, 36, 37
  - c. 35, 42, 49
  - d. 37, 47, 57
- 4. Al sees this sign at a copy center. What is the least number of copies Al can make without losing any money?

- Copies cost 10¢ each.
   Copy machines only take quarters.
   Copy machines do NOT make change. If you make 1 copy, you will NOT get 15¢ back.

#### **Web Links**

- Math Fact Practice! http://www.playkidsgames.com/games/mathfact/mathFact.htm
- e-learning For Kids http://www.e-learningforkids.org/courses.html#math





#### Fast Facts

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#### Fractions in Action

1. Describe the difference between an improper fraction and a mixed number.

Write each improper fraction as a mixed number or a whole number.

**2.** 
$$\frac{11}{6}$$
 \_\_\_\_\_

**3.** 
$$\frac{13}{5}$$
 \_\_\_\_\_

**4.** 
$$\frac{7}{4}$$
 \_\_\_\_\_

**5.** 
$$\frac{12}{6}$$
 \_\_\_\_\_

**2.** 
$$\frac{11}{6}$$
 **3.**  $\frac{13}{5}$  **4.**  $\frac{7}{4}$  **5.**  $\frac{12}{6}$  **6.**  $\frac{15}{2}$  **...**

Write each mixed number as an improper fraction.

**8.** 
$$3\frac{4}{5}$$
 \_\_\_\_\_

9. 
$$4\frac{2}{3}$$
 \_\_\_\_\_

7. 
$$2\frac{1}{3}$$
 8.  $3\frac{4}{5}$  9.  $4\frac{2}{3}$  10.  $5\frac{1}{6}$  11.  $2\frac{4}{5}$ 

11. 
$$2\frac{4}{5}$$
 \_\_\_\_\_

For each of the following improper fractions, write it as a mixed number and draw a picture to show your understanding.

2. 
$$\frac{9}{3}$$
 \_\_\_\_

#### **Delightful Division**

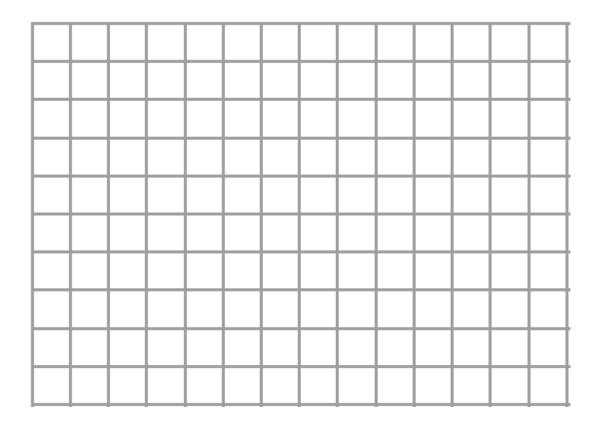
Divide. Check your answer using multiplication.

- **1.** 4)3,124
- **2.** 2)5,317
- **3.** 3)\$2,145
- **4.** 5)8,628

- **5.** 2) 1,572
- **6.** 6)\$120.90
- **7.** 8)3,648
- **8.** 7)\$12,348

#### **OLYMPIC GRAPHS**

As of August 1, 2012, the number of gold medals one by popular countries included: China-15, United States-10, South Korea-5, France-5, Germany-3, and Japan-2. Create a table and a bar graph to show this information. In both the table and graph, include a title and labels. On the graph, include an even interval.



### **Web Links**

- Math Live <a href="http://www.learnalberta.ca/content/me51/html/math5.html">http://www.learnalberta.ca/content/me51/html/math5.html</a>
- Learn Your Tables
   http://www.learnyourtables.co.uk/





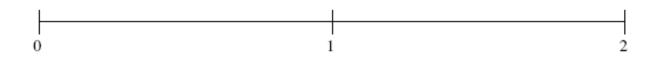
#### Fast Facts

See how many you can do in one minute!

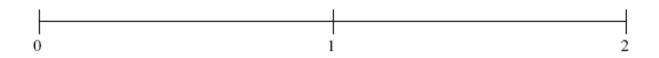
#### Fractions & Decimals

1. Order the fractions by placing them on the number line.

$$\frac{1}{6}$$
,  $\frac{1}{2}$ ,  $1\frac{3}{4}$ ,  $1\frac{1}{3}$ ,  $\frac{11}{12}$ 



$$1\frac{1}{2}$$
,  $\frac{5}{8}$ ,  $\frac{1}{4}$ ,  $1\frac{11}{12}$ ,  $1\frac{1}{4}$ 



Divide and check.

# **Marvelous Multiplication**

Multiply the whole numbers below by using the Distributive Property. (Multiply the tens and ones places separately then add the products.)

$$35 \times 2 = 30 \times 2 + 5 \times 2 = 60 + 10 = 70$$

$$67 \times 2 = \times 2 + 7 \times 2 = 120 + 14 = 134$$

#### **Web Links**

- Spider Match
   http://www.mathplayground.com/ASB\_SpiderMatchIntegers.html
- Find a Friend
   http://www.eduplace.com/kids/mw/swfs/faf\_grade5.html





#### Fast Facts

See how many you can do in one minute!

#### **Knowing Numbers**

Write all the factors of each number. Then identify the number as prime or composite.

- 4. 32 \_\_\_\_\_ 6. 36 \_\_\_\_\_

- 7. 33 \_\_\_\_\_
- 8. 19 \_\_\_\_\_\_ 9. 11 \_\_\_\_\_

#### Divide, Divide!

Divide. Check with multiplication.

- 1. 80)24,000 2. 80)960 3. 30)2,700 4. 80)56,000

#### Solve for the variables.

$$48 \div p = 8$$

$$8 \div p = 8$$

$$10 \div c = 5$$

$$m \div 4 = 5$$

$$35 \div d = 5$$

$$j \div 5 = 8$$

$$z \div 5 = 9$$

$$54 \div c = 9$$

$$54 \div w = 6$$

$$t \div 8 = 1$$

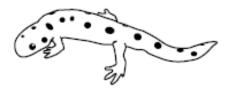
$$32 \div e = 4$$

$$y \div 2 = 4$$

#### MEANT TO MEASURE!

Measure the length to the nearest centimeter and millimeter.





3.



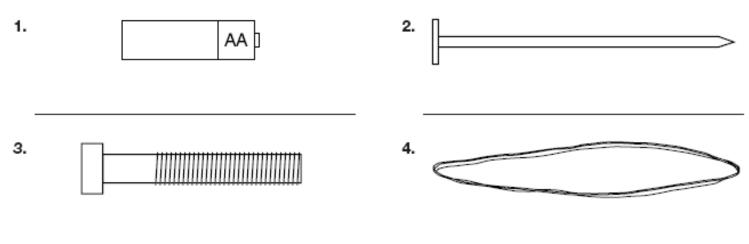


What unit of measurement would you use to find the weight of a watermelon?

What unit of measurement would you use to find the length of a car?

What unit of measurement would you use to find the volume of a juice pitcher?

Measure to the nearest inch, half inch, and quarter inch.



#### **Web Links**

- Cool Math <u>http://www.coolmath.com/</u>
- Primary Games
   http://www.primarygames.com/math.php