



Summer Math Program
Sixth Grade
Week 1



Fast Facts

See how many you can do in one minute!

$20 \div 5 = \underline{\quad}$

$63 \div 7 = \underline{\quad}$

$27 \div 9 = \underline{\quad}$

$24 \div 2 = \underline{\quad}$

$42 \div 7 = \underline{\quad}$

$18 \div 3 = \underline{\quad}$

$24 \div 8 = \underline{\quad}$

$49 \div 7 = \underline{\quad}$

$21 \div 3 = \underline{\quad}$

$25 \div 5 = \underline{\quad}$

$56 \div 8 = \underline{\quad}$

$28 \div 7 = \underline{\quad}$

$64 \div 8 = \underline{\quad}$

$72 \div 9 = \underline{\quad}$

$18 \div 6 = \underline{\quad}$

$32 \div 4 = \underline{\quad}$

$72 \div 8 = \underline{\quad}$

$48 \div 6 = \underline{\quad}$

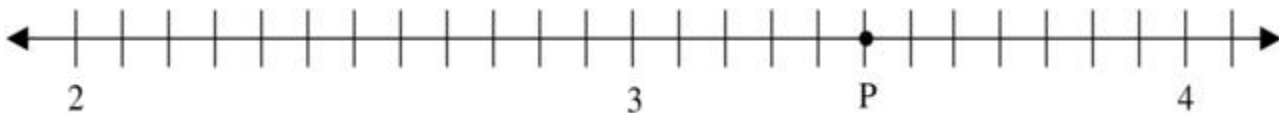
$36 \div 4 = \underline{\quad}$

$36 \div 6 = \underline{\quad}$

Rational Numbers

1. If $4/5 \div 2/3 = _$, then $2/3 \cdot _ = 4/5$. Tell what would go in the blank to make this true.

2. What number on the number line is represented by the point P?



- A. $\frac{5}{2}$
- B. $3\frac{3}{4}$
- C. $3\frac{5}{10}$
- D. $3\frac{5}{12}$

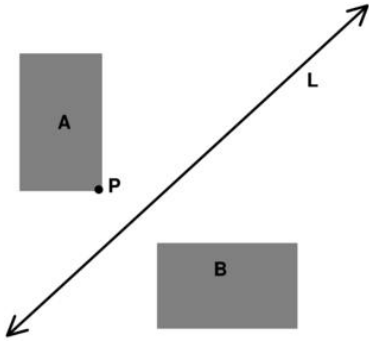
Expressions and Equations

1. Justin tells Ali he has x number of cars. Ali has three more than twice this number of model cars. Which of the following expressions represents the number of model cars Ali has?

- a. $3x$
- b. $3 + x$
- c. $2(3 + x)$
- d. $3 + 2x$

Geometric Ideas

1. Which transformation moves rectangle A into rectangle B?

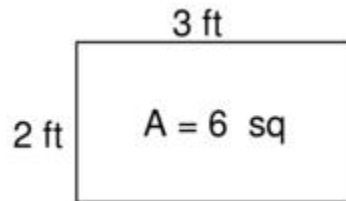


- two translations: first down, and then to the right
- a rotation around point P
- a reflection through the line
- an expansion from quadrant 2 to quadrant 1

Properties of Shapes

1. A rectangle has sides of 2 feet and 3 feet. Its area is 6 square feet. What is the area of this rectangle **in square inches**?

- 60 square inches
- 120 square inches
- 144 square inches
- 864 square inches



Number Operations

1. Find an equivalent decimal for this fraction. Show your work.

$$\frac{13}{4}$$

2. Solve $x + 12 = 23$. Show all your work. Justify your solution (explain what you did and why you did it).

Web Links

Try these web sites for additional practice and interactive learning!

- Math Magician Games (math fluency)
<http://resources.oswego.org/games/mathmagician/cathymath.html>
- EduPlace Math eGames - Math Lingo (math vocabulary)
http://www.eduplace.com/kids/mw/swfs/mathlingo_grade6.html



Summer Math Program
Entering Sixth Grade
Week 2



Fast Facts

See how many you can do in one minute!

$5 \times 9 = \underline{\quad}$

$49 \div 7 = \underline{\quad}$

$6 \times 4 = \underline{\quad}$

$24 \div 3 = \underline{\quad}$

$5 \times 6 = \underline{\quad}$

$18 \div 6 = \underline{\quad}$

$3 \times 12 = \underline{\quad}$

$42 \div 7 = \underline{\quad}$

$8 \times 4 = \underline{\quad}$

$20 \div 5 = \underline{\quad}$

$4 \times 9 = \underline{\quad}$

$56 \div 8 = \underline{\quad}$

$4 \times 7 = \underline{\quad}$

$72 \div 8 = \underline{\quad}$

$8 \times 6 = \underline{\quad}$

$48 \div 4 = \underline{\quad}$

$2 \times 9 = \underline{\quad}$

$48 \div 12 = \underline{\quad}$

$9 \times 9 = \underline{\quad}$

$66 \div 6 = \underline{\quad}$

Fraction Actions

(For a Khan Academy lesson on adding fractions with unlike denominators, go to:

<http://www.khanacademy.org/math/arithmetic/fractions/v/adding-fractions-with-unlike-denominators>)

1. Add these fractions: $\frac{3}{7} + \frac{2}{9}$

2. Patty brought $\frac{1}{2}$ of a cake to class, and Joe brought $\frac{3}{4}$ of a cake on the same day. How much cake did the class have altogether? Show your work.

3. Jill has $\frac{3}{4}$ of a yard of ribbon. Tammy has $\frac{4}{7}$ of a yard. How much do they have altogether? Show your work.

4. Jim has $\frac{1}{2}$ pound of jellybeans and Sarah has $\frac{3}{8}$ pound. Write a math sentence you could use to find how many pounds they have together.

Problem Solving - Data

1. Family A has 2 children, Family B has 1 child, Family C has 1 child, and Family D has 4 children. What is the mean number of children for the families?

2. Last summer Samantha swam the backstroke in five swim meets. Her times were:

56 seconds 56 seconds 44 seconds 47 seconds 42 seconds

Find the mean of her times. Explain how you found your answer.

Work Space

Explanation

Geometry Time

1. How do the areas of these two figures compare? Select your answer, and then explain why you think your answer is correct.

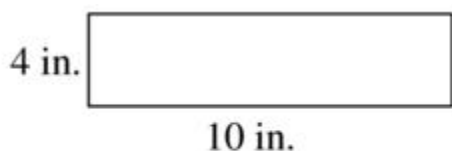


Figure A

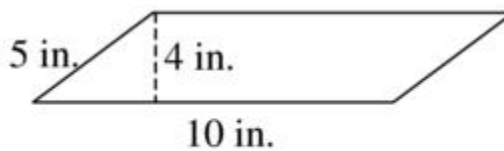


Figure B

- The area of Figure A is greater than the area of Figure B.
- The area of Figure B is greater than the area of Figure A.
- The area of Figure A is equal to the area of Figure B.
- The area of Figure B is twice the area of Figure A.

Explanation:

Web Links

Try these web sites for additional practice and interactive learning!

- Computation Castle <http://www.mrnussbaum.com/castle/index2.html>
- Evaluating Expressions <http://www.math.com/school/subject2/practice/S2U2L3/S2U2L3Pract.html>



Summer Math Program
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Week 3



Fast Facts

See how many you can do in one minute!

$5 \times 9 = \underline{\quad}$

$49 \div 7 = \underline{\quad}$

$6 \times 4 = \underline{\quad}$

$24 \div 3 = \underline{\quad}$

$5 \times 6 = \underline{\quad}$

$18 \div 6 = \underline{\quad}$

$3 \times 12 = \underline{\quad}$

$42 \div 7 = \underline{\quad}$

$8 \times 4 = \underline{\quad}$

$20 \div 5 = \underline{\quad}$

$4 \times 9 = \underline{\quad}$

$56 \div 8 = \underline{\quad}$

$4 \times 7 = \underline{\quad}$

$72 \div 8 = \underline{\quad}$

$8 \times 6 = \underline{\quad}$

$48 \div 4 = \underline{\quad}$

$2 \times 9 = \underline{\quad}$

$48 \div 12 = \underline{\quad}$

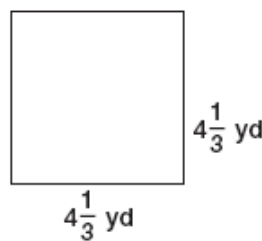
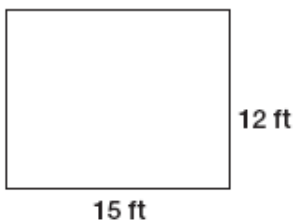
$9 \times 9 = \underline{\quad}$

$66 \div 6 = \underline{\quad}$

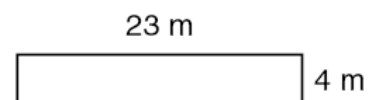
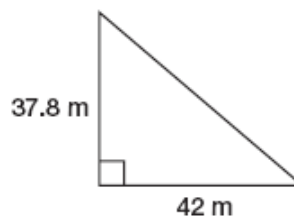
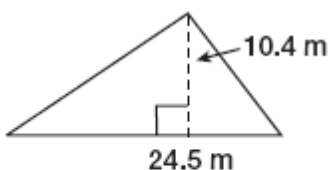
Perimeter and Area

(For a Khan Academy lesson on perimeter and area of rectangles and triangles with practice problems, go to: <http://www.khanacademy.org/math/geometry/basic-geometry/v/area-and-perimeter>)

1. Find the perimeter of these shapes:



2. Find the area of these shapes:



Dealing with Division

Divide. Check your answer by multiplying.

1. $7 \overline{)641}$

2. $5 \overline{)475}$

3. $4 \overline{)2,979}$

4. $9 \overline{)7,582}$

5. $42 \overline{)308}$

6. $72 \overline{)649}$

7. $34 \overline{)544}$

8. $31 \overline{)188}$

9. An electric hybrid car travels 612 miles. It uses 12 gallons of gas. How many miles per gallon does the car get? Explain how you would check your answer.

Work Space

Explanation

Algebraic Equations

Algebra • Equations The division statement $16 \div 5 = 3 \text{ R}1$ can be written as $(5 \times 3) + 1 = 16$. Write and solve a division statement for each equation.

$$4a + r = 19$$

$$19 \div 4 = 4\text{R}3$$

$$5a + r = 33$$

$$33 \div 5 = 6\text{R}3$$

Web Links

Try these web sites for additional practice and interactive learning!

- Math Playground Order of Operations
http://www.mathplayground.com/order_of_operations.html
- EduPlace Brain Teasers
http://www.eduplace.com/kids/mw/bt/bt_5.html



Summer Math Program
Entering Sixth Grade
Week 4



Fast Facts

See how many you can do in one minute!

$9 \times 9 = \underline{\quad}$

$84 \div 7 = \underline{\quad}$

$4 \times 9 = \underline{\quad}$

$36 \div 3 = \underline{\quad}$

$12 \times 6 = \underline{\quad}$

$48 \div 6 = \underline{\quad}$

$8 \times 12 = \underline{\quad}$

$77 \div 7 = \underline{\quad}$

$8 \times 9 = \underline{\quad}$

$25 \div 5 = \underline{\quad}$

$6 \times 7 = \underline{\quad}$

$56 \div 8 = \underline{\quad}$

$11 \times 7 = \underline{\quad}$

$64 \div 8 = \underline{\quad}$

$8 \times 6 = \underline{\quad}$

$63 \div 9 = \underline{\quad}$

$7 \times 9 = \underline{\quad}$

$48 \div 6 = \underline{\quad}$

$9 \times 9 = \underline{\quad}$

$49 \div 7 = \underline{\quad}$

Prime Factorization

(For a Khan Academy lesson on prime factorization, go to:

<http://www.khanacademy.org/math/arithmetic/factors-multiples/v/prime-factorization>)

Find the prime factorization of these numbers using exponential notation:

1. 75 (watch video for hint☺)

2. 36

3. 28

4. 56

5. 11

6. 18

Perfecting Powers

When you multiply or divide a number by a power of 10, the exponent tells you how many places to move the decimal point. Read the following information.

Find 0.093×10^2 .

The exponent for 10 tells you to move the decimal point 2 places. When you multiply, the number gets larger. Move the decimal point 2 places to the **right**.

$$0.093 \times 10^2 = 9.3$$

Find $5.28 \div 10^3$.

The exponent for 10 tells you to move the decimal point 3 places. When you divide, the number gets smaller. Move the decimal point 3 places to the **left**. Insert extra zeros as needed.

$$5.28 \div 10^3 = 0.00528$$

If you are multiplying or dividing by 10, 100, or 1,000, write the number with exponents first to determine how many places to move the decimal point.

$$10 = 10^1 \quad 100 = 10^2 \quad 1,000 = 10^3$$

Multiply or divide by using patterns.

1. 8.3×10^2

2. $9.43 \div 10^3$

3. 0.04×10^3

4. $125 \div 10^2$

5. $9.4 \div 1,000$

6. 7.63×100

7. $5.8 \div 10$

8. $4.22 \times 1,000$

Dazzling Decimals

Find each product.

1. 4.3×5 _____ 2. 8×3.7 _____ 3. 2×8.1 _____ 4. 5.5×7 _____

Divide and check.

1. $3\overline{)2.7}$

2. $8\overline{)6.4}$

3. $6\overline{)3.66}$

4. $8\overline{)14.4}$

Web Links

Try these web sites for additional practice and interactive learning!

- Lemonade Stand - interactive site with economics in mind
<http://www.lemonadestands.com/>
- Fraction Balance Scale - site working with equivalent fractions
http://www.mathplayground.com/Scale_Fractions.html



Summer Math Program
Entering Sixth Grade
Week 5



Fast Facts

See how many you can do in one minute!

$20 \div 5 = \underline{\quad}$

$63 \div 7 = \underline{\quad}$

$27 \div 9 = \underline{\quad}$

$24 \div 2 = \underline{\quad}$

$42 \div 7 = \underline{\quad}$

$18 \div 3 = \underline{\quad}$

$24 \div 8 = \underline{\quad}$

$49 \div 7 = \underline{\quad}$

$21 \div 3 = \underline{\quad}$

$25 \div 5 = \underline{\quad}$

$56 \div 8 = \underline{\quad}$

$28 \div 7 = \underline{\quad}$

$64 \div 8 = \underline{\quad}$

$72 \div 9 = \underline{\quad}$

$18 \div 6 = \underline{\quad}$

$32 \div 4 = \underline{\quad}$

$72 \div 8 = \underline{\quad}$

$48 \div 6 = \underline{\quad}$

$36 \div 4 = \underline{\quad}$

$36 \div 6 = \underline{\quad}$

Cool Conversions!

For a Khan Academy lesson on conversions in the metric system, go to:

<http://www.khanacademy.org/math/arithmetic/basic-ratios-proportions/v/conversion-between-metric-units>

Complete each conversion.

1. $8 \text{ m} = \underline{\quad} \text{ cm}$

2. $15 \text{ g} = \underline{\quad} \text{ kg}$

3. $2 \text{ L} = \underline{\quad} \text{ mL}$

4. $1,200 \text{ m} = \underline{\quad} \text{ km}$

5. $800 \text{ cm} = \underline{\quad} \text{ m}$

6. $0.5 \text{ km} = \underline{\quad} \text{ cm}$

Answer the following conversion questions.

1. 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? _____

2. Which of these is NOT equivalent?

- a. $4000 \text{ ml} = 4 \text{ liters}$
- b. $3000 \text{ ml} = 3000 \text{ cm}^3$
- c. $5000 \text{ cm}^3 = 5 \text{ liters}$
- d. $2000 \text{ ml} = 20 \text{ liters}$

3. Show which is larger, smaller, or equal using the less than symbol ($<$), the greater than symbol ($>$), or the equal sign ($=$).

$$1 \text{ in}^3 \text{ _____ } 1 \text{ ft}^3$$

$$1 \text{ cm}^3 \text{ _____ } 1 \text{ m}^3$$

4. Which of the following is NOT equivalent?

- a. 1 ton = 2000 pounds
- b. 1 mile = 5200 feet
- c. 9 feet = 3 yards
- d. 60 minutes = 3600 seconds

Convert each of the following from the given unit to the other unit.

1. 3 cups = _____ fl oz

2. $3\frac{1}{3}$ ft = _____ in.

3. 8,000 lb = _____ T

4. 72 in. = _____ yd

5. 15,840 ft = _____ yd

6. 48 lb = _____ oz

Fraction Actions

1. In the equation $\frac{1}{3} + x = \frac{5}{12}$, what is the value for x ? _____

2. Solve the following equations.

$$\frac{1}{2} + 2\frac{3}{4} = b - 1\frac{5}{6}$$

What is the value of $2n - 12\frac{3}{4}$, given $n = \frac{1}{4}$?

$$\frac{11}{12} - x = \frac{1}{4}$$

$$x + \frac{1}{3} = \frac{3}{4}$$

3. Beth has a piece of wood $\frac{7}{8}$ of a yard long. She uses $\frac{1}{3}$ of a yard to build an airplane. Use a math sentence to show how much wood is left over.

Find a common denominator then add or subtract the following fractions.

1. $\frac{1}{2} + \frac{3}{8}$

2. $\frac{7}{12} + \frac{1}{5}$

3. $\frac{1}{6} + \frac{3}{11}$

4. $\frac{7}{10} + \frac{8}{9}$

5.
$$\begin{array}{r} \frac{5}{7} \\ - \frac{2}{5} \\ \hline \end{array}$$

6.
$$\begin{array}{r} \frac{11}{12} \\ - \frac{1}{8} \\ \hline \end{array}$$

7.
$$\begin{array}{r} \frac{5}{9} \\ - \frac{1}{5} \\ \hline \end{array}$$

8.
$$\begin{array}{r} \frac{7}{8} \\ - \frac{2}{3} \\ \hline \end{array}$$

Web Links

Try these web sites for additional practice and interactive learning!

- Escape from Fraction Manor
<http://www.mathplayground.com/HauntedFractions/HFGameLoader.html>
- Extra practice for whole numbers, decimals, and algebra
http://www.eduplace.com/kids/mw/practice/6/ep6_01.html



Summer Math Program
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Week 6



Fast Facts

See how many you can do in one minute!

$50 \div 10 = \underline{\quad}$

$63 \div 9 = \underline{\quad}$

$54 \div 9 = \underline{\quad}$

$24 \div 12 = \underline{\quad}$

$84 \div 7 = \underline{\quad}$

$36 \div 3 = \underline{\quad}$

$24 \div 3 = \underline{\quad}$

$42 \div 7 = \underline{\quad}$

$56 \div 8 = \underline{\quad}$

$45 \div 5 = \underline{\quad}$

$49 \div 7 = \underline{\quad}$

$25 \div 5 = \underline{\quad}$

$72 \div 8 = \underline{\quad}$

$48 \div 8 = \underline{\quad}$

$40 \div 4 = \underline{\quad}$

$36 \div 4 = \underline{\quad}$

$63 \div 7 = \underline{\quad}$

$72 \div 6 = \underline{\quad}$

$32 \div 8 = \underline{\quad}$

$81 \div 9 = \underline{\quad}$

Mean and Mode

For a Khan Academy lesson on calculating mean and mode for a given set of data, go to:
<http://www.khanacademy.org/math/statistics/v/mean-median-and-mode>

Find the mean and mode of each of these data sets.

1. hours worked each week
33, 38, 27, 34, 39, 40, 39,
40, 34, 39, 33, 38, 34

2. number of movies seen
2, 5, 14, 6, 3, 6, 0, 1, 5,
0, 6, 1, 5, 6, 0, 3, 3, 6,
5, 3

Mean _____ Mode _____

Mean _____ Mode _____

3. 16, 20, 25, 22, 30,
29, 12, 16, 20, 30

4. 20, 12, 35, 16, 34, 28,
34, 28, 1, 30, 15

Mean _____ Mode _____

Mean _____ Mode _____

Answer the following questions about data.

5. Dave's math grades are 82, 71, 89, 88, 82, and 92. What is his mean grade?

6. The mean of nine test scores is 61. If a score of 71 is added to the group of scores, what is the new mean?

- a. 62
- b. 65
- c. 66
- d. 68

7. What is the difference between the mean salary of the workers and the mean salary of everyone including the President and Vice-President? You may use a calculator.

Position	Salary
President	\$256,000
Vice-President	\$127,000
Worker #1	\$35,000
Worker #2	\$20,000
Worker #3	\$18,000
Worker #4	\$31,000
Worker #5	\$24,000
Worker #6	\$21,000
Worker #7	\$26,000

8. The table shows the scores of 20 students on a history test. What is the average student score?

Score	Number of Students
90	3
85	5
80	3
75	4
70	2
60	0
55	3

Perfecting Percents

Find the percent of each part of a whole and express as a percent.

1.) 50 is what percent of 100?

2.) 20 is what percent of 80?

Ex. $50/100(100) =$
 $.50(100) = 50$
50 percent

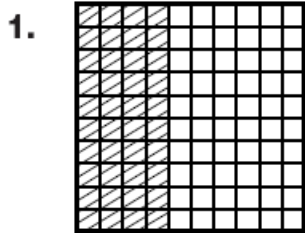
3.) 30 is what percent of 90?

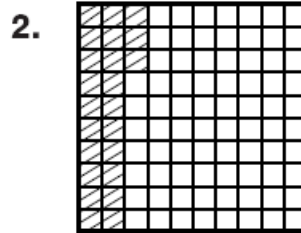
4.) 10 is what percent of 50?

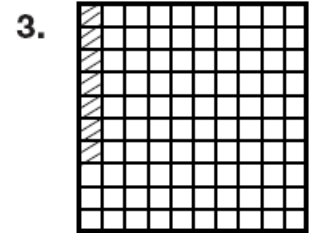
5.) 75 is what percent of 200?

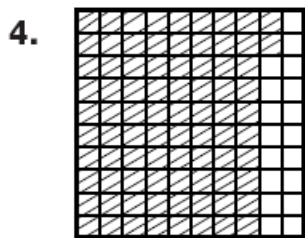
6.) 25 is what percent of 150?

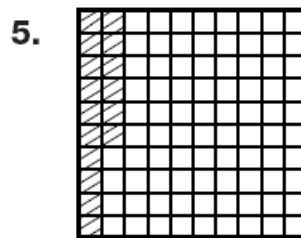
Write the percent of each grid that is shaded.

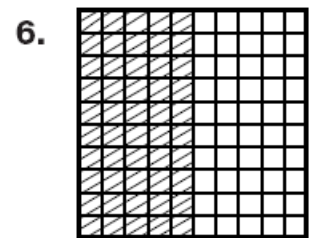












PLACE VALUE PATTERNS

Fill in the table to show the value of each number. One is done for you as a guide.

<i>Decimal</i>	<i>Tenths</i>	<i>Hundredths</i>	<i>Thousandths</i>
1.3	13	130	1300
0.4			
1.5			
0.75			
22.1			

Web Links

Try these web sites for additional practice and interactive learning!

- Order of Operations
http://www.mathplayground.com/order_of_operations.html
- Extra practice for algebra, integers, and coordinate graphing
http://www.eduplace.com/kids/mw/practice/5/ep5_08.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 $\frac{5}{6}$), find equivalent fractions (e.g., $\frac{5}{10}$ is equal to $\frac{1}{2}$ which is equal to $\frac{3}{6}$), 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

$\frac{1}{2}$

$\frac{1}{2}$

$\frac{1}{3}$

$\frac{1}{3}$

$\frac{1}{3}$

$\frac{1}{4}$

$\frac{1}{4}$

$\frac{1}{4}$

$\frac{1}{4}$

$\frac{1}{5}$

$\frac{1}{5}$

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Summer Math Program
Entering Sixth Grade
Week 7



Fast Facts

See how many you can do in one minute!

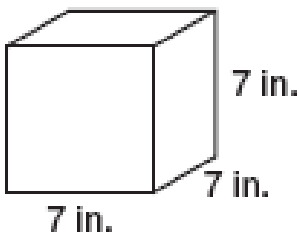
$\begin{array}{r} 11 \\ \times 4 \\ \hline \end{array}$	$\begin{array}{r} 10 \\ \times 12 \\ \hline \end{array}$	$\begin{array}{r} 48 \\ \div 12 \\ \hline \end{array}$	$\begin{array}{r} 8 \\ \times 3 \\ \hline \end{array}$	$\begin{array}{r} 56 \\ \div 8 \\ \hline \end{array}$	$\begin{array}{r} 2 \\ \times 5 \\ \hline \end{array}$	$\begin{array}{r} 6 \\ \times 6 \\ \hline \end{array}$	$\begin{array}{r} 54 \\ \div 9 \\ \hline \end{array}$	$\begin{array}{r} 7 \\ \times 8 \\ \hline \end{array}$	$\begin{array}{r} 72 \\ \div 6 \\ \hline \end{array}$
$\begin{array}{r} 1 \\ \times 2 \\ \hline \end{array}$	$\begin{array}{r} 1 \\ \times 9 \\ \hline \end{array}$	$\begin{array}{r} 2 \\ \times 2 \\ \hline \end{array}$	$\begin{array}{r} 6 \\ \times 4 \\ \hline \end{array}$	$\begin{array}{r} 10 \\ \times 11 \\ \hline \end{array}$	$\begin{array}{r} 12 \\ \times 9 \\ \hline \end{array}$	$\begin{array}{r} 7 \\ \div 1 \\ \hline \end{array}$	$\begin{array}{r} 7 \\ \times 10 \\ \hline \end{array}$	$\begin{array}{r} 8 \\ \times 11 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ \times 6 \\ \hline \end{array}$
$\begin{array}{r} 60 \\ \div 6 \\ \hline \end{array}$	$\begin{array}{r} 12 \\ \times 10 \\ \hline \end{array}$	$\begin{array}{r} 20 \\ \div 4 \\ \hline \end{array}$	$\begin{array}{r} 2 \\ \times 11 \\ \hline \end{array}$	$\begin{array}{r} 56 \\ \div 7 \\ \hline \end{array}$	$\begin{array}{r} 20 \\ \div 4 \\ \hline \end{array}$	$\begin{array}{r} 3 \\ \times 9 \\ \hline \end{array}$	$\begin{array}{r} 18 \\ \div 9 \\ \hline \end{array}$	$\begin{array}{r} 11 \\ \times 9 \\ \hline \end{array}$	$\begin{array}{r} 5 \\ \times 6 \\ \hline \end{array}$
$\begin{array}{r} 54 \\ \div 9 \\ \hline \end{array}$	$\begin{array}{r} 45 \\ \div 5 \\ \hline \end{array}$	$\begin{array}{r} 6 \\ \times 4 \\ \hline \end{array}$	$\begin{array}{r} 11 \\ \div 11 \\ \hline \end{array}$	$\begin{array}{r} 16 \\ \div 2 \\ \hline \end{array}$	$\begin{array}{r} 56 \\ \div 7 \\ \hline \end{array}$	$\begin{array}{r} 12 \\ \div 2 \\ \hline \end{array}$	$\begin{array}{r} 7 \\ \times 7 \\ \hline \end{array}$	$\begin{array}{r} 1 \\ \times 10 \\ \hline \end{array}$	$\begin{array}{r} 11 \\ \times 5 \\ \hline \end{array}$

Va Va Volume!

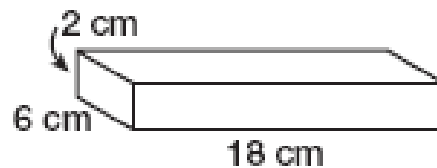
For a Khan Academy lesson on finding the volume of a rectangular prism, go to: <http://www.khanacademy.org/math/geometry/basic-geometry/v/solid-geometry-volume>. The first part of the video covers triangular prisms; you can forward to about 2:29 into the video for rectangular prisms.

Find the volume of each rectangular prism.

1.



2.



Copy and complete the chart below.

Measurements of Rectangular Prisms					
Length	Width	Height	Perimeter of base	Area of base	Volume
2 ft	4 ft	5 ft			
	6 ft	3 ft	26 ft		
10 ft	3 ft	5 ft			
4 ft	7 ft				56 ft ³

Ratio Rave

Write each ratio three different ways.



- circles to hearts _____
- stars to squares _____
- hearts to stars _____
- squares to stars _____
- circles to stars _____
- hearts to squares _____
- $\frac{3}{9}$ _____
- 12:36 _____
- 14 to 22 _____

10. Alice asked 25 people what pets they had. She found that 14 people had cats and 11 people had dogs. What is the ratio of dogs to cats?

DIVIDING FRACTIONS

Find $4 \div \frac{2}{3}$.

Step 1: Write the whole number as a fraction.

$$4 \div \frac{2}{3} = \frac{4}{1} \div \frac{2}{3}$$

Step 2: Find the reciprocal of the divisor.

To find the reciprocal, flip the fraction upside down.

The reciprocal of $\frac{2}{3}$ is $\frac{3}{2}$.

Step 3: Rewrite as a multiplication problem using the reciprocal.

$$\frac{4}{1} \div \frac{2}{3} = \frac{4}{1} \times \frac{3}{2}$$

Step 4: Look for common factors to divide.

$$\frac{\cancel{4}^2 \times 3}{1 \times \cancel{2}_1} = \frac{2 \times 3}{1 \times 1} = \frac{6}{1} = 6$$

Divide. Write each answer in simplest form.

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

2. $3 \div \frac{1}{6}$

3. $\frac{4}{5} \div 4$

Web Links

Try these web sites for additional practice and interactive learning!

- Math Fact Practice!

<http://www.playkidsgames.com/games/mathfact/mathFact.htm>

- e-learning For Kids

<http://www.e-learningforkids.org/courses.html#math>



Summer Math Program
Entering Sixth Grade
Week 8



Fast Facts

See how many you can do in one minute!

$$\frac{1}{5} + \frac{1}{2} =$$

$$\frac{3}{9} + \frac{6}{11} =$$

$$\frac{1}{5} + \frac{4}{9} =$$

$$\frac{1}{2} + \frac{3}{6} =$$

$$\frac{4}{6} + \frac{1}{10} =$$

$$\frac{3}{5} + \frac{3}{9} =$$

$$\frac{1}{3} + \frac{3}{12} =$$

$$\frac{1}{2} + \frac{6}{9} =$$

$$\frac{3}{6} + \frac{3}{4} =$$

Equivalent Fractions

For a Khan Academy lesson on equivalent fractions, go to:

<http://www.khanacademy.org/math/arithmetic/fractions/v/equivalent-fractions>.

Find the missing number to create equivalent fractions.

$$\frac{1}{\square} = \frac{4}{8}$$

$$\frac{4}{\square} = \frac{16}{24}$$

$$\frac{\square}{10} = \frac{20}{40}$$

$$\frac{5}{6} = \frac{20}{\square}$$

$$\frac{1}{4} = \frac{\square}{8}$$

$$\frac{5}{8} = \frac{15}{\square}$$

$$\frac{1}{7} = \frac{\square}{21}$$

$$\frac{\square}{9} = \frac{12}{27}$$

Pick three of the fraction sets from above. Draw pictures to show how the fractions are equivalent.

PROBLEM SOLVING

Solve these story problems with fractions. Write a number sentence then solve.

1. The apricot and banana bread takes $\frac{3}{4}$ of an hour to bake. The marinade takes about $\frac{1}{12}$ of an hour to prepare. How long will it take to bake the apricot and banana bread and then prepare the marinade?

Write your answer in simplest form.

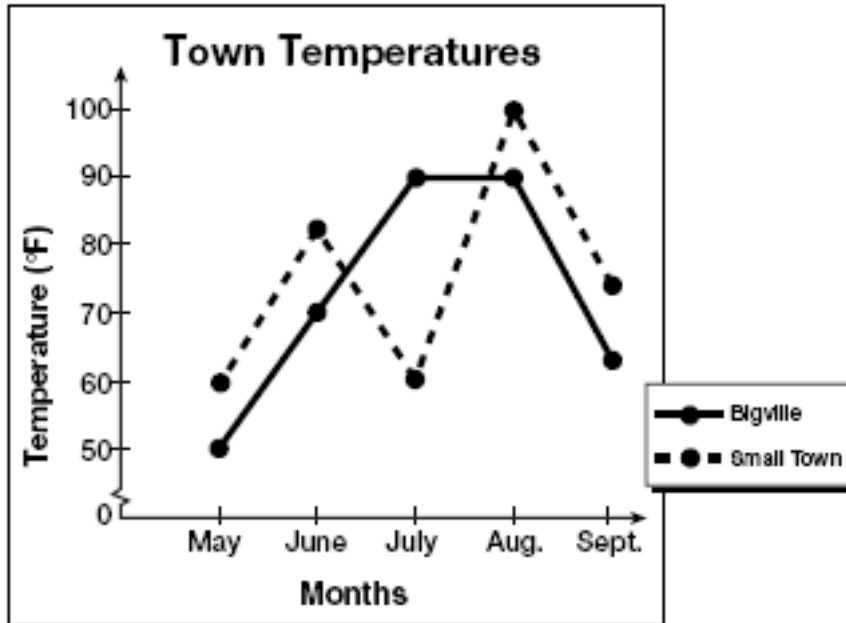
2. At the deli, Jon got $\frac{3}{4}$ pound of ham and $\frac{7}{16}$ pound of turkey. How many pounds of meat did Jon get?
-

3. In a survey of bedtimes, $\frac{3}{5}$ of the students said their bedtime is between 9 P.M. and 9:59 P.M. and $\frac{1}{4}$ said their bedtime is between 10 P.M. and 10:59 P.M. How many more students go to sleep at the earlier time?
-

4. Ms. Harmon's science lesson lasts $\frac{3}{4}$ of an hour. So far $\frac{5}{12}$ of an hour has elapsed. What fraction of an hour remains of Ms. Harmon's science lesson? Write your answer in simplest form. Then explain your answer.
-

Line Graphs

Use the following line graph to answer the questions.



1. Which town, overall, had higher temperatures during the summer?

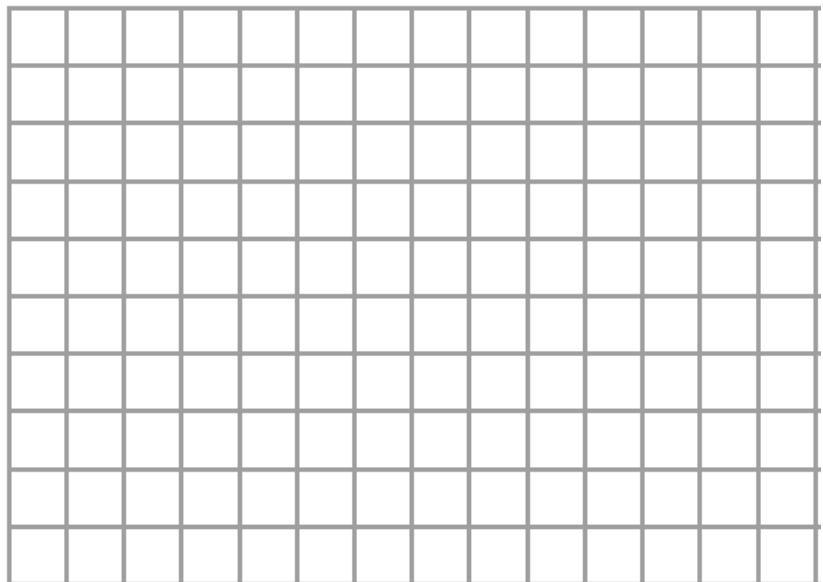
2. During which month was the difference in temperatures the greatest?

3. During which month did the temperature in Bigville exceed that of Small Town?

4. During which month was there no change in temperature in Bigville?

5. Draw a double line graph for the following data.

Heights of Class Plants		
Month	"Greenie"	"Leafy"
Feb.	2"	1 $\frac{1}{2}$ "
Mar.	3"	3"
Apr.	4"	5"
May	5"	8"



Web Links

Try these web sites for additional practice and interactive learning!

- Math Live

<http://www.learnalberta.ca/content/me5l/html/math5.html>

- Learn Your Tables

<http://www.learnyourtables.co.uk/>



Summer Math Program
Entering Sixth Grade
Week 9



Fast Facts

See how many you can do in one minute!

$$\frac{2}{12} + \frac{2}{12} =$$

$$\frac{7}{11} + \frac{2}{5} =$$

$$\frac{5}{7} + \frac{1}{3} =$$

$$\frac{5}{9} + \frac{1}{7} =$$

$$\frac{8}{10} + \frac{1}{2} =$$

$$\frac{6}{9} + \frac{2}{8} =$$

$$\frac{5}{12} + \frac{1}{2} =$$

$$\frac{3}{9} + \frac{8}{9} =$$

$$\frac{8}{10} + \frac{2}{6} =$$

Fractions = Decimals = Percents

For a Khan Academy lesson on changing fractions to decimals to percents, go to:

<http://www.khanacademy.org/math/arithmetic/fractions/v/representing-a-number-as-a-decimal--percent--and-fraction-2>.

Complete the table.

	Fraction	Decimal	Percent
1.	$\frac{1}{2}$		50%
2.		0.6	
3.			44%
4.	$\frac{1}{4}$		
5.			35%
6.		0.24	
7.	$\frac{3}{8}$		
8.			12%
9.		0.66	
10.	$\frac{7}{10}$		

Divide and Conquer!

Write a fraction for each division expression.

1. $3 \div 5 =$ _____

2. $5 \div 8 =$ _____

3. $9 \div 11 =$ _____

4. $1 \div 4 =$ _____

5. $7 \div 9 =$ _____

6. $4 \div 7 =$ _____

7. Explain the relationship between division and fractions.

DATA, DATA EVERYWHERE

Find the mean and mode for each set of data.

1) 8, 6, 20, 8, 18, 18

Mean _____ Mode _____

3) 6, 14, 11, 14, 15, 6

Mean _____ Mode _____

2) 18, 12, 17, 11, 13, 17, 19, 13

Mean _____ Mode _____

4) 17, 17, 19, 17, 15

Mean _____ Mode _____

5) Number of wins for the Newland High School Hawks each year for the last 10 years: 41, 50, 57, 60, 45, 41, 33, 41, 43, 44.

Mean _____ Mode _____

Web Links

Try these web sites for additional practice and interactive learning!

- Spider Match

http://www.mathplayground.com/ASB_SpiderMatchIntegers.html

- Find a Friend

http://www.eduplace.com/kids/mw/swfs/faf_grade6.html



Summer Math Program
Entering Sixth Grade
Week 10



Fast Facts

See how many you can do in one minute!

$$\frac{3}{6} + \frac{6}{11} =$$

$$\frac{1}{2} + \frac{9}{10} =$$

$$\frac{10}{11} + \frac{5}{9} =$$

$$\frac{10}{11} + \frac{1}{4} =$$

$$\frac{7}{9} + \frac{2}{7} =$$

$$\frac{6}{10} + \frac{1}{5} =$$

$$\frac{5}{12} + \frac{1}{2} =$$

$$\frac{7}{10} + \frac{4}{11} =$$

$$\frac{3}{9} + \frac{5}{9} =$$

Awesome Angles

For a Khan Academy lesson on using a protractor to measure angles go to:
<http://www.khanacademy.org/math/geometry/angles/v/measuring-angles>.

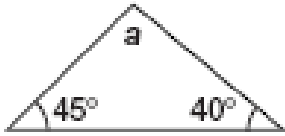
Go to <http://www.mathplayground.com/measuringangles.html> for an activity on measuring angles with an interactive protractor.

Identify each angle as right, acute, or obtuse.

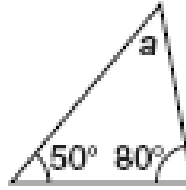


Find the value of a .

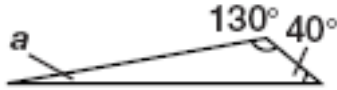
1.



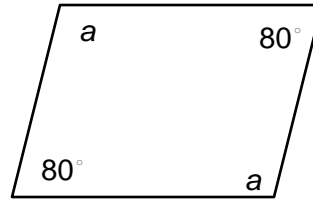
2.



3.

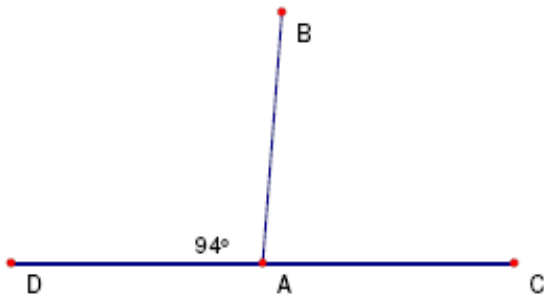


4.

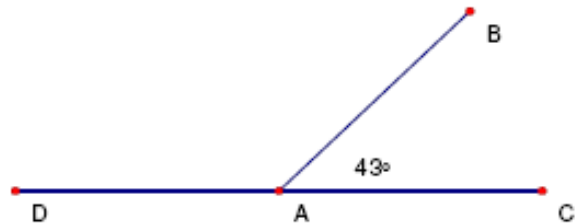


Identify the value of the missing angles.

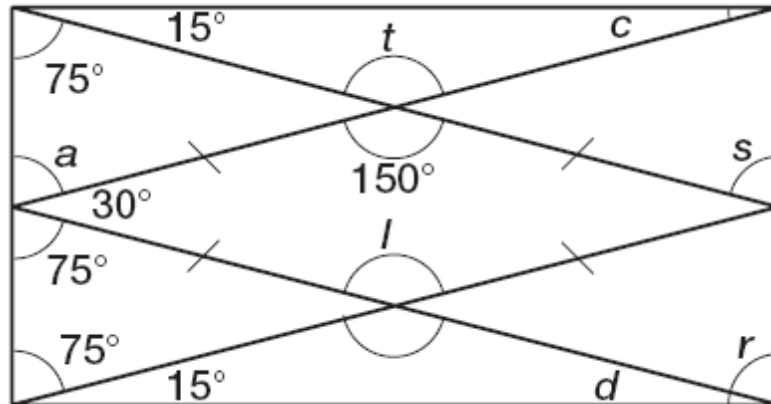
1.



2.



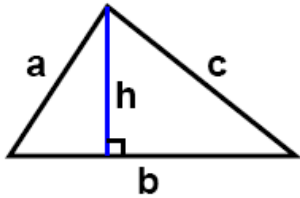
Use the diagram to complete the chart.



Angle	c	a	t	s	r	d	l
Measure							

AREA AND PERIMETER

Review the following information to solve the three problems on the next page.

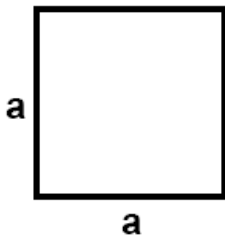


Triangles - Common

A polygon with three angles and three sides.

$$\text{Area} = \frac{1}{2} \text{ base} \times \text{height} = \frac{1}{2} bh$$

$$\text{Perimeter} = a + b + c$$

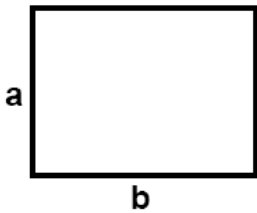


Square

A Square is a quadrilateral with four equal sides and angles at 90° .

$$\text{Area} = a^2$$

$$\text{Perimeter} = 4a$$

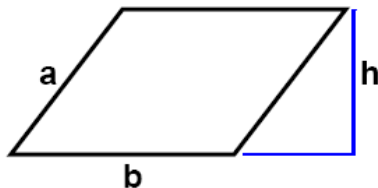


Rectangle

A Rectangle is a quadrilateral with four equal angles at 90° .

$$\text{Area} = ab$$

$$\text{Perimeter} = 2(a + b)$$

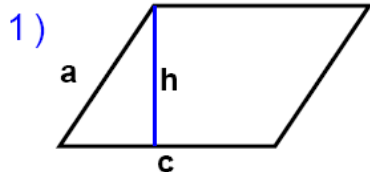


Parallelogram

A Parallelogram is a quadrilateral with opposite sides parallel.

$$\text{Area} = bh$$

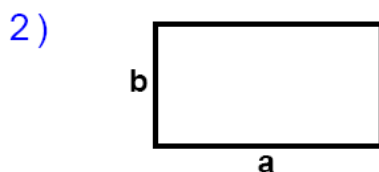
$$\text{Perimeter} = 2(a + b)$$



$a = 57.87$ inches
 $c = 81$ inches $h = 53$ inches

Area: _____

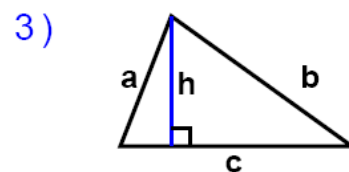
Perimeter: _____



$a = 85$ cm $b = 46$ cm

Area: _____

Perimeter: _____



$a = 52.61$ mm $b = 83.7$ mm
 $c = 87$ mm $h = 49$ mm

Area: _____

Perimeter: _____

Web Links

Try these web sites for additional practice and interactive learning!

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