Date

Time

Math Boxes 6.1

1. You draw one card at random from a regular deck of 52 playing cards (no jokers). What is the chance of drawing a(n)

   a. 4? _____

   b. card with a prime number?

   _____

   c. face card (jack, queen, or king)?

   _____

   d. even-numbered black card?

   _____

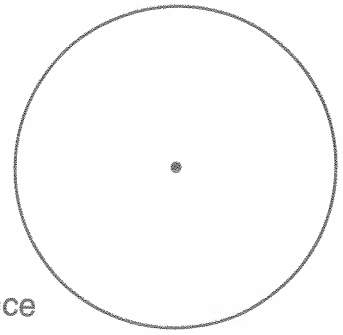
SRB 142

2. a. Use your Geometry Template to draw sectors of this spinner and color them so that the chances of landing on these colors are as follows:

   red: $\frac{3}{10}$

   blue: 0.33

   green: 20%



   b. On this spinner, what is the chance of *not* landing on red, blue, or green? _____

SRB 140

3. The distance from New York to San Francisco is about 2,930 miles. A bus made this trip in 6 days. On average, about how many miles did the bus travel each day?

   _____

SRB 240 241

4. Rename each mixed number as a fraction.

   a. $3\frac{7}{8} =$ _____

   b. _____ $= 5\frac{8}{9}$

   c. _____ $= 8\frac{5}{6}$

   d. _____ $= 6\frac{9}{7}$

   e. $14\frac{2}{3} =$ _____

SRB 66

5. Circle the number sentence that describes the numbers in the table.

x	y
3	11
5	15
0	5
10	25

   $y = x + 10$

   $(2 * x) + 5 = y$

   $y - 2 = (5 - x)$

   $y - 8 = x$

SRB 223–225

6. Write each number using digits. Then round each number to the nearest tenth.

   a. Twenty-five thousand, four hundred ten and eight hundredths

   number _____

   rounded _____

   b. Fifty-nine and six hundred seventy-two thousandths

   number _____

   rounded _____

SRB 54

Date Time

Math Boxes 6.2

1. Write a percent for each fraction.

   a. $\frac{4}{5} =$ _____

   b. $\frac{8}{12} =$ _____

   c. $\frac{7}{8} =$ _____

   d. $\frac{3}{4} =$ _____

   e. $\frac{2}{3} =$ _____

2. I am a 3-dimensional geometric shape. I have 5 faces. One face is a rectangle The other faces are triangles.

   I am called a

   _____

3. Add or subtract.

   a. $3\frac{2}{3} + 1\frac{4}{5} =$ _____

   b. $8\frac{1}{7} - 3\frac{3}{4} =$ _____

   c. $6\frac{1}{8} - 4\frac{5}{6} =$ _____

   d. $\frac{8}{5} + 3\frac{1}{9} =$ _____

4. Write the reciprocal.

   a. $\frac{3}{8}$ _____

   b. $\frac{5}{9}$ _____

   c. $1\frac{3}{4}$ _____

   d. 0.68 _____

   e. 2.3 _____

5. Estimate each product by rounding the larger factor to the nearest ten-thousand.

   a. 313,457 * 5 _____

   b. 2,773,029 * 2 _____

   c. 49,221 * 30 _____

   d. 12 * 402,655 _____

6. Divide.

   a. $8\overline{)409}$ b. $14\overline{)9{,}579}$

Date Time

Math Boxes 6.3

1. You roll 2 six-sided dice. Give the probability of rolling the following totals.

   a. 2 _____ b. 12 _____

   c. 11 _____ d. 7 _____

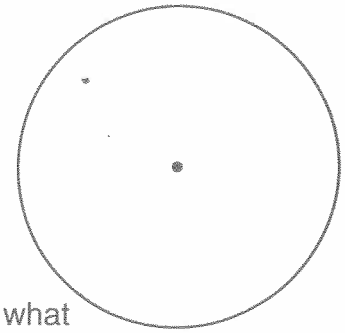
   e. 0 _____ f. 3 or 4 _____

   g. An even number _____

2. a. Use your Geometry Template to draw sectors of this spinner and color them so that the chances of landing on these colors are as follows:

   red: 1 out of 4

   blue: $\frac{3}{8}$



   b. On this spinner, what is the chance of *not* landing on red or blue? _____

3. The distance from Chicago to Los Angeles is about 2,060 miles. A family drove this distance in 4 days. On average, about how many miles did the family travel each day?

   _____

4. Write a mixed number for each fraction.

   a. $\frac{320}{25}$ = _____

   b. _____ = $\frac{43}{7}$

   c. _____ = $\frac{101}{5}$

   d. _____ = $\frac{75}{8}$

   e. $\frac{147}{4}$ = _____

5. Circle the number sentence that describes the numbers in the table.

m	*p*
8	16
0	−8
4	4
10	22

   $p = m * 2$

   $(3 - m) = p + 8$

   $p = (3 * m) - 8$

   $m - 8 = p$

6. Write each number using digits. Then round each number to the nearest ten-thousand.

   a. Four million, three hundred seventy-two thousand, nine hundred five

   number _____

   rounded _____

   b. Thirteen million, sixty-eight thousand, four hundred twenty-three

   number _____

   rounded _____

Date Time

Math Boxes 6.4

1. Write a percent for each fraction.

a. $\frac{10}{50} =$ _____

b. $\frac{6}{9} =$ _____

c. $\frac{15}{18} =$ _____

d. $\frac{14}{16} =$ _____

e. $\frac{10}{15} =$ _____

2. I am a 3-dimensional geometric shape. I have 5 faces. Two faces are triangles. The other faces are rectangles.

I am called a

_____.

3. Add or subtract.

a. $3\frac{8}{9} + 1\frac{3}{12} =$ _____

b. $\frac{18}{6} - 1\frac{2}{3} =$ _____

c. $\frac{9}{5} + 4\frac{3}{10} =$ _____

d. $4\frac{5}{8} - 2\frac{7}{12} =$ _____

4. Write the reciprocal.

a. 5 _____

b. $\frac{2}{3}$ _____

c. $2\frac{4}{7}$ _____

d. 0.8 _____

e. 9.64 _____

5. Estimate each product by rounding the larger factor to the nearest million.

a. 46,882,003 * 4 _____

b. 831,247 * 27 _____

c. 3,589,221 * 15 _____

d. 20 * 13,402,655 _____

6. Divide.

a. $9\overline{)681}$

b. $23\overline{)8,041}$

Date Time

Math Boxes 6.5

1. Add or subtract.

   a. $2\frac{2}{5} - \frac{8}{10} =$ _____

   b. $\frac{16}{8} - 1\frac{1}{9} =$ _____

   c. $\frac{14}{16} + 2\frac{1}{2} =$ _____

   d. $1\frac{7}{8} + \frac{24}{16} =$ _____

SRB 80 81

2. Complete each sentence with an algebraic expression.

   a. If Mark earns x dollars per hour when he baby-sits, then he earns _____ dollars when he baby-sits for $3\frac{1}{2}$ hours.

   b. Bill's dog is 3 years older than his cat. If the dog is y years old, then the cat is _____ years old.

SRB 222

3. Write the following numbers with words.

   a. 249.2 _____

   b. 0.432 _____

   c. 0.00001 _____

SRB 28

4. Give a rough estimate (a ballpark estimate) for each quotient.

   a. 643.27 ÷ 5 _____

   b. 728.09 ÷ 7 _____

   c. 432.67 ÷ 8 _____

   d. 2,091.05 / 5 _____

   e. 324.6 / 4 _____

SRB 50 243

5. Divide.

   a. $\frac{8}{9} \div \frac{3}{4} =$ _____

   b. $\frac{7}{8} \div \frac{1}{3} =$ _____

   c. $\frac{6}{9} \div \frac{1}{2} =$ _____

   d. $\frac{2}{4} \div \frac{3}{8} =$ _____

   e. $\frac{8}{24} \div \frac{4}{24} =$ _____

SRB 89 90

Date Time

Math Boxes 6.6

1. Complete.

   a. $\frac{1}{8}$ of 2 = _____

   b. $\frac{3}{4}$ of 80 = _____

   c. $\frac{4}{7}$ of 77 = _____

   d. $\frac{1}{2}$ of $\frac{1}{8}$ = _____

   e. $\frac{5}{12}$ of 60 = _____

SRB 83 85

2. Alan bought a model car for $8.98, a pair of shoes for $14.49, and a new jacket for $24.95. How much more did he spend on the jacket than on the model car?

   _____

SRB 239

3. Add or subtract.

   a. 32 + (−52) = _____

   b. _____ = 16 − 29

   c. _____ = 48 − (−63)

   d. _____ = −56 + 94

   e. −28 − (−43) = _____

SRB 92 93

4. Draw a 72° angle. Label the angle.

   Circle the kind of angle you drew.

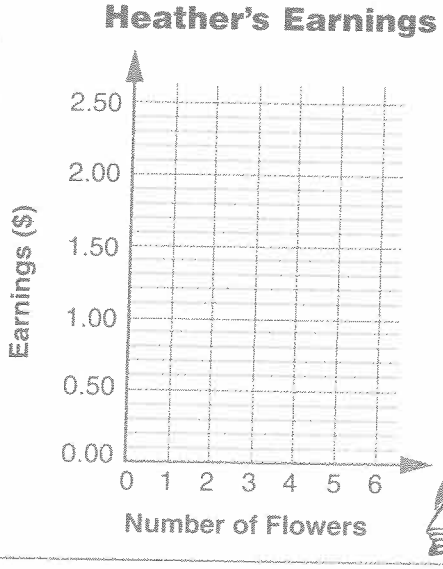
   acute obtuse reflex right straight

SRB 148 212–214

5. Complete the table. Then graph the data and connect the points.

   Heather earns $0.35 for each paper flower she makes for the school fun fair.

Flowers (f)	Earnings ($) ($0.35 * f$)
1	
2	
	1.05
5	
	2.10



SRB 236

Rule: Earnings = $0.35 * number of flowers

Date Time

Math Boxes 6.7

1. Add or subtract.

a. $\frac{8}{10} + 8\frac{1}{3} =$ _____

b. $5\frac{4}{5} - 2\frac{7}{8} =$ _____

c. $\frac{15}{4} + \frac{9}{7} =$ _____

d. $\frac{23}{10} - 1\frac{1}{5} =$ _____

2. Complete each sentence with an algebraic expression.

a. If each bag of potatoes weighs at least *p* pounds, then 6 bags weigh at least _____ pounds.

b. Jack is 6 inches taller than Michael. If Jack is *h* inches tall, then Michael is _____ inches tall.

3. Write the following numbers with words.

a. 0.001 _____

b. 0.017 _____

c. 0.0001 _____

d. 2.603 _____

4. Give a rough estimate (a ballpark estimate) for each quotient.

a. 137.8 ÷ 6 _____

b. 248.19 ÷ 12 _____

c. 4,507.08 ÷ 9 _____

d. 26,991.05 / 3 _____

e. 2,804.79 / 4 _____

5. Divide.

a. $\frac{5}{6} \div \frac{1}{2} =$ _____

b. $\frac{3}{8} \div \frac{3}{4} =$ _____

c. $\frac{2}{3} \div \frac{5}{6} =$ _____

d. $\frac{20}{25} \div \frac{5}{25} =$ _____

e. $\frac{7}{12} \div \frac{2}{5} =$ _____

Date Time

Math Boxes 6.8

1. Complete.

a. $\frac{1}{8}$ of 48 = _____

b. $\frac{5}{9}$ of 90 = _____

c. $\frac{2}{17}$ of 51 = _____

d. $\frac{3}{19}$ of 95 = _____

e. $\frac{8}{10}$ of 800 = _____

2. At a garage sale, Alisha sold her CDs for $29.00, her stuffed dog for $7.65, and her old tricycle for $12.80. How much more did she sell her CDs for than her old tricycle?

_____

3. Add or subtract.

a. 25 − (−14) = _____

b. _____ = −18 − 5

c. _____ = −74 − (−8)

d. _____ = 46 + (−38)

e. −87 + 42 = _____

4. Draw a 256° angle. Label the angle.

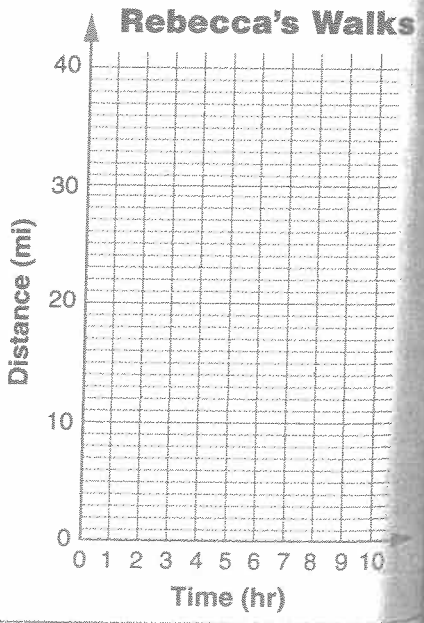
Circle the kind of angle you drew.

acute obtuse reflex right straight

5. Complete the table. Then graph the data and connect the points.

Rebecca walks at an average speed of $3\frac{1}{2}$ miles per hour.

Time (hr) (h)	Distance (mi) ($3\frac{1}{2} * h$)
1	
2	
	$17\frac{1}{2}$
7	
	35



Rule: Distance = $3\frac{1}{2}$ miles per hour * number of hours

Date Time

Math Boxes 6.9

1. Complete the table.

Fraction	Decimal	Percent
$\frac{5}{8}$		
	0.65	
		47%
$\frac{8}{12}$		

SRB 32 33 36 37

2. Multiply or divide.

   a. $-3 * 5 =$ _____

   b. $-10 * -8 =$ _____

   c. _____ $= -4 * -30$

   d. _____ $= 28 \div -7$

   e. _____ $= -56 \div -8$

SRB 95

3. Use the following formula to calculate about how long it will take an object to reach the bottom of a well:

$$t = \frac{1}{4} * \sqrt{d}$$

where d is the distance in feet the object falls and t is the time in seconds it takes to reach the bottom. This formula does not account for air resistance. About how long would it take a bowling ball to hit the bottom of a well 100 feet deep?

_____

SRB 227 228

4. Tell what additional information you need to solve the following problem:
Melissa took 3 friends to lunch. She had $20 to spend on lunch. All 4 people ordered spaghetti. How much change did Melissa receive from her $20?

_____

_____

_____

SRB 240 241

5. Make each sentence true by inserting parentheses.

   a. $4 * 7 - 6 / 3 = 26$

   b. $3^3 - 49 / 7 + 12 = 8$

   c. $2\frac{5}{8} - 3 / 4 + 1 / 2 = 2\frac{3}{8}$

   d. $6 + 15 / 3 - 2 * 5 = 1$

   e. $2\frac{5}{8} - 3 / 4 + 1 / 2 = 1\frac{3}{8}$

SRB 229

Date Time

Math Boxes 6.10

1. Multiply. Write your answers in simplest form.

a. $\frac{3}{8} * \frac{2}{5} =$ _____

b. $\frac{6}{10} * \frac{7}{8} =$ _____

c. _____ $= \frac{2}{3} * \frac{9}{11}$

d. _____ $= \frac{4}{12} * \frac{5}{3}$

e. _____ $= \frac{7}{8} * \frac{5}{6}$

SRB 85

2. Write > or < to make each sentence true.

a. $\frac{5}{8}$ _____ $\frac{3}{16}$

b. $\frac{4}{7}$ _____ $\frac{5}{6}$

c. $1\frac{1}{8}$ _____ $\frac{9}{7}$

d. $\frac{10}{11}$ _____ $\frac{8}{9}$

e. $\frac{15}{12}$ _____ $\frac{16}{15}$

SRB 70

3. Multiply.

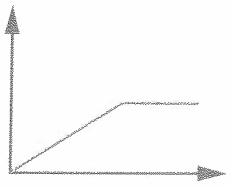
a. 64.8 × 12.9

b. 22.04 × 48.7

c. 3.16 × 29.2

SRB 45 46

4. Give this mystery graph a title, label the axes, and describe a situation it might represent.



_____

_____

_____

_____

SRB 134

5. Complete.

a. $16\frac{2}{3}\%$ of 36 = _____

b. $33\frac{1}{3}\%$ of 54 = _____

c. 75% of 88 = _____

d. 59% of 100 = _____

e. $12\frac{1}{2}\%$ of 48 = _____

SRB 57

Date Time

Math Boxes 6.12

1. Multiply. Write your answer in simplest form.

a. $\frac{7}{9} * \frac{2}{3} =$ _____

b. $\frac{5}{6} * \frac{4}{10} =$ _____

c. _____ $= \frac{4}{5} * \frac{5}{7}$

d. _____ $= \frac{4}{3} * \frac{10}{15}$

e. _____ $= \frac{8}{12} * \frac{7}{9}$

2. Write > or < to make each sentence true

a. $\frac{5}{9}$ _____ $\frac{6}{10}$

b. $\frac{7}{12}$ _____ $\frac{8}{15}$

c. $\frac{15}{8}$ _____ $1\frac{6}{7}$

d. $\frac{11}{12}$ _____ $\frac{8}{9}$

e. $\frac{4}{7}$ _____ $\frac{5}{9}$

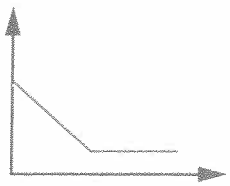
3. Multiply.

a.
$$\begin{array}{r} 42.6 \\ * \ 38.15 \\ \hline \end{array}$$

b.
$$\begin{array}{r} 12.7 \\ * \ 60.3 \\ \hline \end{array}$$

c.
$$\begin{array}{r} 80.2 \\ * \ 4.3 \\ \hline \end{array}$$

4. Give this mystery graph a title, label the axes, and describe a situation it might represent.



_____

_____

_____

_____

_____

5. Complete.

a. 80% of 50 = _____

b. 10% of 83 = _____

c. 25% of 48 = _____

d. 35% of 100 = _____

e. 50% of 72 = _____

Date Time

Math Boxes 6.13

1. The following table shows the results of rolling a six-sided die 50 times.

Number Showing	1	2	3	4	5	6
Number of Times	10	5	11	12	4	8

Tell whether each sentence below is true or false.

a. On the next roll of the die, a 5 is more likely to come up than a 1. _____

b. There is a 50-50 chance of rolling a prime number. _____

c. There is a 50-50 chance of rolling a composite number. _____

2. Multiply. Write your answer in simplest form.

a. $\frac{6}{8} * \frac{2}{5} =$ _____

b. $\frac{3}{9} * \frac{9}{12} =$ _____

c. _____ $= \frac{4}{7} * \frac{6}{5}$

d. _____ $= \frac{8}{10} * \frac{30}{47}$

e. _____ $= \frac{7}{25} * \frac{75}{100}$

3. Rewrite each fraction as a percent.

a. $\frac{20}{40} =$ _____

b. $\frac{35}{50} =$ _____

c. $\frac{18}{24} =$ _____

d. $\frac{7}{8} =$ _____

e. $\frac{15}{75} =$ _____

4. Add.

a. $\frac{3}{8} + 1\frac{3}{4} =$ _____

b. $\frac{2}{3} + 5\frac{1}{5} =$ _____

c. $\frac{7}{8} + \frac{2}{4} + \frac{1}{3} =$ _____

d. $\frac{3}{5} + \frac{3}{8} =$ _____

e. $\frac{2}{9} + 2\frac{1}{3} =$ _____

5. Solve.

a. $\frac{4}{7}$ of 56 = _____

b. $\frac{2}{3}$ of 15 = _____

c. $\frac{8}{9}$ of 72 = _____

d. $\frac{3}{8}$ of 32 = _____

e. $\frac{9}{10}$ of 31 = _____

Date Time

Math Boxes 7.1

1. Solve.

Solution

a. $\frac{q}{8} = 16$ _____

b. $\frac{60}{p} = 5$ _____

c. $\frac{3}{7} = \frac{t}{28}$ _____

d. $\frac{f}{21} = \frac{2}{14}$ _____

SRB 67 68 111

2. Fill in the missing equivalents.

Fraction	Decimal	Percent
$\frac{7}{8}$		
	0.73	
		30%
	0.625	
$\frac{28}{40}$		

SRB 32 36 37

3. The area A of a circle is given by the formula $A = \pi * r^2$, where r is the radius of the circle. Use the formula to calculate the area of the circle below.

Area _____ (unit)

SRB 200

4. Multiply. Show your work.

a. 46 * 19

b. 707 * 32

SRB 19 20

5. Write each number in standard notation.

a. 72 billion = _____

b. 0.3 trillion = _____

c. 42.78 million = _____

d. 89.6 billion = _____

e. 0.5 million = _____

SRB 4

6. Draw a reflex angle LNE. Then measure it.

Measure of $\angle LNE$ is about _____°.

SRB 148 212–214

Date Time

Math Boxes 7.2

1. Divide.

   a. $8\overline{)1{,}742}$

   b. $29\overline{)697}$

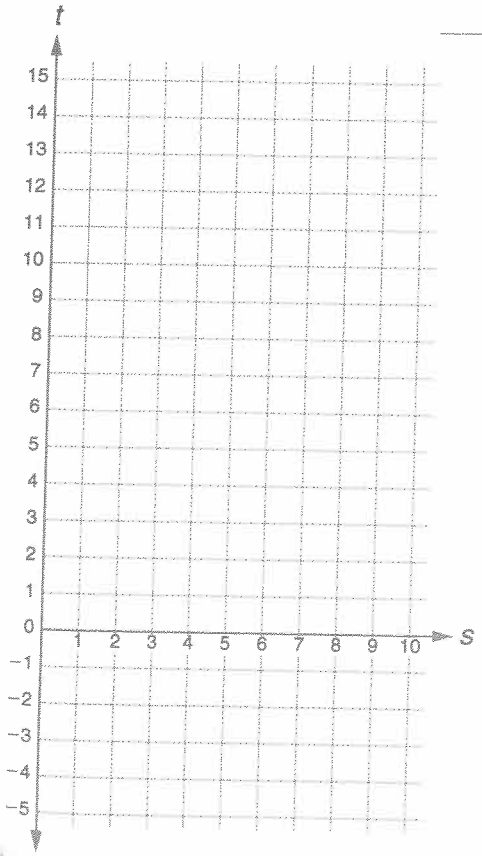
   c. $47\overline{)4{,}802}$

SRB 22-24

2. Complete the table for the formula below. Then plot the points to make a graph.

   Formula: $2s - 5 = t$

s	t
1	
2	
5	
	11
	15



SRB 236

3. The highest point on Earth is the top of Mt. Everest, which is 8,848 meters above sea level. The lowest point on land is the Dead Sea, which is 399 meters below sea level. The lowest point on Earth's surface is thought to be in the Pacific Ocean at 11,034 meters below sea level.

   a. How much higher is the top of Mt. Everest than the Dead Sea?

   _____
   (unit)

   b. How many more meters below sea level is the lowest point on Earth than the Dead Sea?

   _____
   (unit)

SRB 91 239

Date Time

Math Boxes 7.3

1. Solve.

	Solution
a. $\frac{n}{6} = 4$	
b. $\frac{42}{b} = 6$	
c. $\frac{5}{8} = \frac{t}{32}$	
d. $\frac{d}{18} = \frac{4}{6}$	

2. Fill in the missing equivalents.

Fraction	Decimal	Percent
$\frac{18}{20}$		
	0.98	
		60%
$\frac{7}{25}$		
		12.5%

3. The formula $C = (F - 32) * \frac{5}{9}$ can be used to convert temperatures from Fahrenheit to Celsius.

C is the temperature in degrees Celsius, and F is the temperature in degrees Fahrenheit. Calculate the temperature in degrees Celsius for the following Fahrenheit temperatures:

a. 68°F = _____ °C

b. 41°F = _____ °C

c. 131°F = _____ °C

4. Multiply.

a. 602 * 59

b. 218 * 193

5. Write each number in standard notation.

a. 14.05 billion = _____

b. 2.3 trillion = _____

c. 389.1 million = _____

d. 5.07 billion = _____

e. 88.08 trillion = _____

6. Draw a triangle that has three acute angles.

Date Time

Math Boxes 7.4

1. Divide.

   a. $7\overline{)2{,}045}$ b. $46\overline{)552}$ c. $32\overline{)2{,}714}$

2. Complete the table for the formula below. Then plot the points to make a graph.

   Formula: $4h = g$

h	*g*
1	
2	
3	
	20
	26

3. The highest point in North America is the top of Mt. McKinley, Alaska, with an elevation of 20,320 feet. The highest point in the lower 48 states of the United States is the top of Mt. Whitney, California, with an elevation of 14,494 feet. The lowest point in the United States is in Death Valley, California, at 282 feet below sea level.

   a. How much higher is the top of Mt. McKinley than Mt. Whitney?

   _____

   b. How many feet below Mt. McKinley is Death Valley?

   _____

Date Time

Math Boxes 7.5

1. Multiply. Write each answer in simplest form.

a. _____ $= 3\frac{2}{3} * 2\frac{7}{8}$

b. _____ $= \frac{12}{10} * \frac{11}{5}$

c. _____ $= \frac{4}{3} * 3\frac{6}{7}$

d. $6\frac{1}{4} * 3\frac{11}{8} =$ _____

SRB 84–86

2. Solve the equation.

$7b + 16 = 5b + 24$

Solution _____

SRB 233

3. Add or subtract.

a. $23 + (-32) =$ _____

b. $-14 + (-78) =$ _____

c. _____ $= -800 + 275$

d. _____ $= 45 - 155$

e. _____ $= -195 - (-223)$

SRB 92 93

4. Complete.

a. $\frac{1}{10}$ of 268 = _____

b. $\frac{1}{100}$ of 21,509 = _____

c. $\frac{1}{1{,}000}$ of 7,834 = _____

d. $\frac{1}{100}$ of 72 = _____

SRB 48 49 83

5. Write the prime factorization for each number.

a. 36 = _____

b. 64 = _____

c. 58 = _____

d. 79 = _____

SRB 12

Date Time

Math Boxes 7.6

1. Complete.

a. 25% of 32 = _____

b. 60% of 25 = _____

c. _____ = 50% of 31

d. _____ = $66\frac{2}{3}$% of 36

e. _____ = 70% of 400

SRB 57

2. Add or subtract.

a. 42.8 + 5.2 = _____

b. 1.206 + 0.58 = _____

c. \$3.85 − \$1.17 = _____

d. _____ = 105.33 − 97.5

e. _____ = 13.659 − 3.67

SRB 40 41

3. Fill in the missing numbers.

a. 947 * 23 * 16 = 16 * 23 * _____

b. 18 * 7 * 3 = 21 * _____

c. _____ * 51 * 97 = 51 * 97 * 82

d. _____ * 14 * 182 = 28 * 182

e. _____ * 29 * 30 = 150 * 29

SRB 102

4. Write a number story for 5,893 / 15. Then solve the problem.

_____

_____

_____

Solution _____

SRB 242

5. For each of the following, tell which measure is needed: *perimeter, circumference, area,* or *volume.*

a. Jean is going to tile her kitchen floor. She needs to know how many square-foot tiles to buy. _____

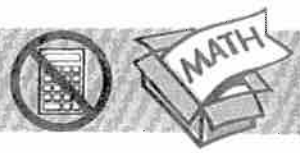
b. Tyrone needs to add 1 drop of anti-chlorine solution to his aquarium for every 2 liters of water. He wants to know how many drops to add. _____

c. Mrs. Vui plans to build a circular fence around her garden. She wants to know how much fencing to buy. _____

SRB 194–196 201

Date Time

Math Boxes 7.8



1. Complete.

a. 75% of 44 = _____

b. 80% of 70 = _____

c. _____ = 37.5% of 32

d. _____ = 90% of 36

e. _____ = $33\frac{1}{3}$% of 1,200

2. Add or subtract.

a. 26.25 + 16.31 = _____

b. 635.2 − 55.89 = _____

c. 2.043 − 0.8 = _____

d. _____ = 0.97 − 0.404

e. _____ = $106.39 + $68.28

3. Fill in the missing numbers.

a. 58 * 91 * 27 = 27 * 58 * _____

b. 24 * 16 * 10 = 240 * _____

c. _____ * 35 * 94 = 35 * 94 * 87

d. _____ * 500 = 25 * 20 * 153

e. _____ * 426 * 81 = 81 * 945 * 426

4. Write a number story for $87\overline{)5{,}224}$. Then solve the problem.

_____

_____

_____

Solution _____

5. For each of the following, tell which measure is needed: *perimeter, circumference, area,* or *volume.*

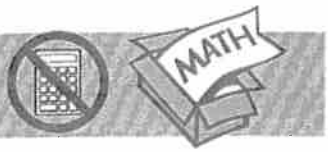
a. Warren plans to install wood molding where his living room walls meet the ceiling. He needs to know how much wood to buy. _____

b. Tina runs on a circular track. She knows the diameter of the track. She wants to find the distance around. _____

c. Fertilizer is to be added to Flo's garden at the rate of 1 cup for every 20 square feet. Flo wants to know how much fertilizer to add. _____

Date Time

Math Boxes 7.9



1. Divide.

a. $34\overline{)826}$ **b.** $75\overline{)7{,}698}$ **c.** $53\overline{)2{,}005}$

2. Complete.

a. 20% of 80 = _____

b. 75% of 48 = _____

c. 55% of 1,000 = _____

d. 30% of 250 = _____

e. 80% of 70 = _____

3. Solve.

Solution

a. $\frac{28}{c} = 14$ _____

b. $\frac{25}{75} = \frac{d}{12}$ _____

c. $\frac{15}{33} = \frac{5}{x}$ _____

d. $\frac{m}{21} = \frac{5}{7}$ _____

e. $\frac{500}{10{,}000} = \frac{p}{100}$ _____

4. Multiply. Write your answer in simplest form.

a. $\frac{1}{2} * 5\frac{3}{4} =$ _____ **b.** _____ $= 3 * \frac{5}{8}$ **c.** _____ $= 2\frac{1}{5} * \frac{3}{22}$

d. _____ $= \frac{14}{6} * \frac{8}{7}$ **e.** $\frac{20}{100} * \frac{18}{8} =$ _____ **f.** $4\frac{3}{4} * \frac{3}{4} =$ _____

Date Time

Math Boxes 8.1

1. Circle the number sentences that are true.

a. $(18 + 9) \div 3 + 6 = 15$

b. $32 \div 8 * 4^2 = 1$

c. $30 = 90 \div 10 + 20$

d. $1 = 100 - 75 / 5^2$

e. $14 - (7 * 2) + 6 = 6$

SRB 223

2. Insert the decimal point in the product.

a. $4.02 * 85 = 3417$

b. $-9.6 * 38.82 = -372672$

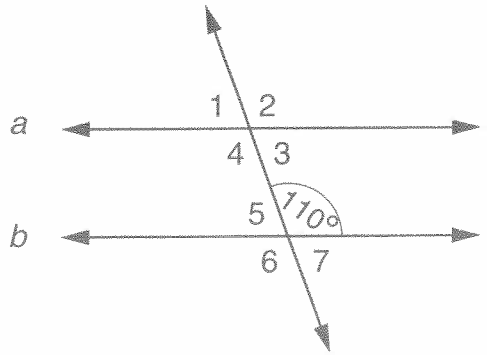
c. $67 * 1.004 = 67268$

d. $0.89 * -5.1 = -4539$

e. $-2.307 * -1.9 = 43833$

SRB 45 46

3. Without using a protractor, find the measure in degrees of each numbered angle. Write each measure on the drawing. (Lines *a* and *b* are parallel.)



SRB 151

4. Fill in the blanks. (*Hint:* For decimals, think fractions.)

a. $\frac{4}{9} * \_\_\_\_\_ = 1$

b. $\frac{11}{12} * \_\_\_\_\_ = 1$

c. $\frac{16}{5} * \_\_\_\_\_ = 1$

d. $0.3 * \_\_\_\_\_ = 1$

e. $0.06 * \_\_\_\_\_ = 1$

SRB 103

5. Molly filled a measuring cup with milk to the $\frac{3}{4}$-cup mark. Now she wants to add $\frac{1}{2}$ cup of buttermilk to the cup. To what mark should she pour the buttermilk?

_____
(unit)

SRB 239

Date Time

Math Boxes 8.2

1. Solve the equation.

$45 - 3g = g + 33$

Solution _____

SRB 233

2. Complete.

a. $\frac{3}{4}$ of 280 = _____

b. $\frac{4}{12}$ of 303 = _____

c. $\frac{5}{6}$ of 420 = _____

d. $\frac{2}{9}$ of 360 = _____

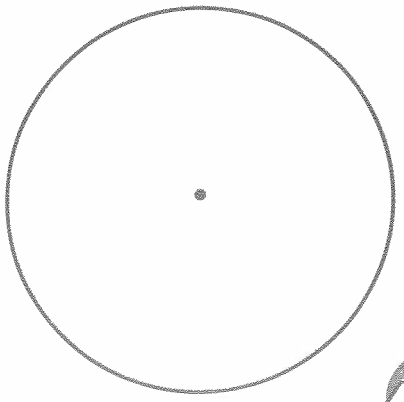
e. $\frac{3}{5}$ of 1,200 = _____

SRB 83

3. Janine watches about 12 hours of television per week. Complete the table. Then use your protractor to make a circle graph of the information.

Type of Show	Number of Hours	Percent of Hours	Degrees
Comedy	4		
Educational	1		
News	2		
Sports	3		
Cartoon	2		
Total			

_____
(title)



SRB 141

4. Solve.

Solution

a. $\frac{42}{18} = \frac{x}{3}$ _____

b. $\frac{125}{n} = \frac{5}{1}$ _____

c. $\frac{36}{w} = \frac{18}{2}$ _____

d. $\frac{d}{150} = \frac{3}{5}$ _____

e. $\frac{90}{3} = \frac{9}{u}$ _____

5. Divide. Show your work.

$18\overline{)2{,}020}$

SRB 22–24

Date Time

Math Boxes 8.6

1. Add or subtract.

a. $14 + (-72) =$ _____

b. _____ $= 27 - (-28)$

c. _____ $= -63 + (-87)$

d. _____ $= -58 + 105$

e. $-33 - (-89) =$ _____

SRB 92 93

2. Circle the equation that describes the relationship between the numbers in the table.

x	y
0.55	$\frac{1}{2}$
0.6	1
1	5
1.5	10

$(y + 0.1) * \frac{1}{2} = x$

$(y * 0.1) + \frac{1}{2} = x$

$\frac{0.1y}{2} = x$

$(y + \frac{1}{2}) * 0.1 = x$

SRB 224 235

3. Which data set below has the following landmarks: range 29, maximum 48, mode 22, median 34? (Circle its letter.)

a.

Stems (10s)	Leaves (1s)
0	
1	9 9
2	1 2 2 2 2 5 7
3	4 6 6 8 9 9
4	2 7 8 8

b.

20	/
22	///
24	//
25	/
34	//
35	//
36	/
37	/
39	//
42	/
48	/

SRB 129 130

4. Evaluate each expression. Use the rules for order of operations.

a. $9 * 5 / 10 + 3 - 2 =$ _____

b. $8 - 6 * 4 + 8 / 2 =$ _____

c. _____ $= 5^2 * 2 + 9 * 2$

d. _____ $= 15 / (2 + 3) - 8 * 2$

e. _____ $= 2 + 2 * 12 + 3^2 - 5$

SRB 229

5. Estimate each product by rounding the larger factor.

a. $19{,}304{,}767 * 3$ _____

b. $5 * 29{,}789{,}124$ _____

c. $867{,}259 * 7$ _____

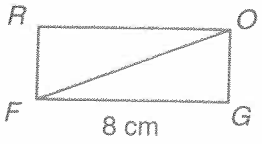
d. $25{,}483{,}001 * 40$ _____

SRB 244

Date Time

Math Boxes 8.7

1. The area of Triangle *FOG* is 12 cm^2.
What is the perimeter of Rectangle *FROG*?



_____ cm

Explain how you found the perimeter of Rectangle *FROG*.

2. Draw a tree diagram for the following problem. Then answer the two questions.

The cafeteria is serving spaghetti, hamburgers, and hot dogs for lunch. The drinks are milk, soda, and juice. If you choose your meal and drink at random, what is the probability of having

a. a hot dog?

_____

b. a hot dog and juice?

_____

3. Multiply.

a. $\begin{array}{r} 473 \\ \times\ 95 \\ \hline \end{array}$

b. $\begin{array}{r} 847 \\ \times\ 103 \\ \hline \end{array}$

c. 624 * 215

d. 704 * 425

Date Time

Math Boxes 8.9

1. The spreadsheet shows how Jonas spent his money for the first quarter of the year.

a. In which cell is the largest amount that Jonas spent?

_____

b. Calculate the values for Cells E2 and E3 and enter them on the spreadsheet.

	A	B	C	D	E
1	Month	January	February	March	Total
2	Food	15.28	19.14	10.04	
3	Movies	10.00	14.00	5.00	

c. Circle the correct formula for figuring out how much money Jonas spent in February.

D1 + D2 + D3 C2 + C3 B3 + C3 + D3

SRB 137 138

2. Multiply or divide.

a. $-8 * 6 =$ _____

b. $550 / (-11) =$ _____

c. _____ $= -125 / (-5)$

d. _____ $= -930 / 31$

e. _____ $= -500 * 40$

SRB 95

3. Complete.

a. 19 qt = _____ pt

b. 9 gal 3 pt = _____ c

c. _____ pt _____ c = 27 c

d. _____ c = 43 pt

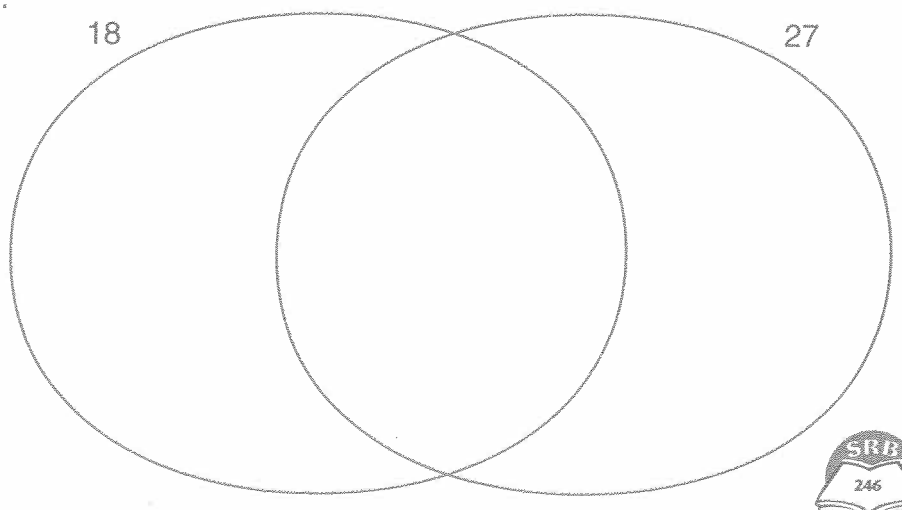
e. 560 c = _____ qt

SRB 201

4. Complete the Venn diagram.

Name at least two ways in which the numbers 18 and 27 are alike.

Name at least two ways in which they are different.



SRB 246

Date Time

Math Boxes 8.10

1. The formula $d = rt$ gives the distance d traveled at speed r in time t. Use this formula to solve the problems below.

   a. Ms. Ruiz is driving at an average speed of 60 miles per hour. At this speed, how far can she drive in 4.5 hours? _____

   b. Jill walks at an average speed of 5 miles per hour. At this speed, how far can she walk in 2.5 hours? _____

   c. The distance from San Francisco to Los Angeles is about 420 miles. About how many hours will it take to drive from San Francisco to Los Angeles at an average speed of 55 miles per hour? _____

SRB 227 228

2. Multiply or divide. Write your answer in simplest form.

   a. $\frac{8}{9} \div \frac{4}{5} =$ _____

   b. $3\frac{8}{5} * \frac{2}{3} =$ _____

   c. _____ $= 5\frac{1}{2} \div \frac{11}{12}$

   d. _____ $= \frac{29}{4} * \frac{15}{6}$

   e. _____ $= \frac{3}{7} * 18$

SRB 86 89

3. Write five names for the number in the name-collection box so that each name includes the number (−2) and subtraction.

10

SRB 93 95

4. Write each number in standard notation. Then round it to the nearest tenth.

   a. four and sixty-two thousandths
      standard notation _____
      rounded _____

   b. three and eighty-eight hundredths
      standard notation _____
      rounded _____

   c. two hundred seventy thousandths
      standard notation _____
      rounded _____

SRB 27 54

5. Subtract. Write your answer as a fraction or mixed number in simplest form.

   a. $7\frac{3}{4} - 3\frac{3}{8} =$ _____

   b. _____ $= \frac{5}{2} - 1\frac{5}{6}$

   c. _____ $= 5\frac{1}{3} - 2\frac{5}{9}$

   d. _____ $= 17 - 13\frac{4}{5}$

   e. $8\frac{2}{3} - 4\frac{7}{9} =$ _____

SRB 81 82

Date

Time

Math Boxes 8.11

The spreadsheet shows Cecilia's utility bills for two months.

If Cecilia entered the wrong electric bill for February, which cell should she correct?

_____

	A	B	C	D	E
1	Month	Phone	Electric	Gas	Total
2	January	$17.95	$38.50	$120.50	
3	February	$34.70	$35.60	$148.96	

Calculate the values for Cells E2 and E3 and enter them on the spreadsheet.

Circle the correct formula for figuring out the total cost of utilities in February.

A2 + B2 + C2 + D2 B3 + C3 + D3 (B2 +C2 + D2) / 3

Multiply or divide.

$-35 * 16 =$ _____

$240 / -3 =$ _____

_____ $= -840 / -40$

_____ $= 25 * -32$

_____ $= -199 * -12$

Complete.

10 qt = _____ pt

7 gal 3 qt = _____ pt

_____ pt = 48 c

_____ gal _____ qt = 43 pt

40 c = _____ gal

Complete the Venn diagram.

Name at least two ways in which the numbers 21 and 14 are alike.

Name at least two ways in which they are different.

21

14

Date Time

Math Boxes 8.12

1. The formula $d = rt$ gives the distance d traveled at speed r in time t. Use this formula to solve the problems below.

a. The distance from Chicago to Los Angeles is about 2,190 miles. About how many hours will it take to drive from Chicago to Los Angeles at an average speed of 55 miles per hour? _____

b. About how long will an airplane flying at an average speed of 500 miles per hour take to travel this distance? _____

c. Circle the formula that is equivalent to $d = rt$.

$r = d / t$ $r = d - t$ $r = t / d$ $r = t + d$

2. Multiply or divide. Write your answer in simplest form.

a. $\frac{3}{8} \div \frac{6}{7} =$ _____

b. $1\frac{2}{3} * \frac{4}{5} =$ _____

c. _____ $= \frac{6}{2} \div \frac{9}{11}$

d. _____ $= 3\frac{3}{9} * \frac{2}{11}$

e. _____ $= 5\frac{1}{5} * 8$

3. Write five names for the number in the name-collection box so that each name contains the fraction $\frac{1}{3}$ and includes multiplication.

8

4. Write each number in standard notation. Then round to the nearest tenth.

a. six and twenty-nine hundredths

standard notation _____

rounded _____

b. four and thirteen ten-thousandths

standard notation _____

rounded _____

c. fourteen and sixty-two hundredths

standard notation _____

rounded _____

5. Subtract. Write your answer as a fraction or mixed number in simplest form.

a. $\frac{3}{2} - \frac{5}{8} =$ _____

b. _____ $= 4\frac{2}{3} - 1\frac{1}{2}$

c. _____ $= 3\frac{1}{4} - 1\frac{5}{6}$

d. $5\frac{8}{9} - \frac{25}{25} =$ _____

Date Time

Math Boxes 9.1

1. a. Draw an obtuse angle *CAT*. Measure it.

$\angle CAT$ measures about _____ °.

b. Draw a reflex angle *NOD*. Measure it.

$\angle NOD$ measures about _____ °.

SRB 148 212 213

2. Divide.

9,755 / 82 → _____

SRB 22–24

3. Divide.

a. $\frac{3}{7} \div \frac{4}{5} =$ _____

b. $\frac{8}{12} \div \frac{2}{3} =$ _____

c. $\frac{9}{8} \div \frac{6}{5} =$ _____

d. $\frac{7}{10} \div \frac{2}{1} =$ _____

e. $7 \div \frac{4}{5} =$ _____

SRB 89 90

4. Circle the equation that describes the relationship between the numbers in the table.

$(x - 9) * 5 = y$

$\frac{x - 9}{5} = y$

$(y + 5) * 9 = x$

$5 * (y + 5) = x$

x	y
10	$\frac{1}{5}$
14	1
19	2
49	8

SRB 224 225 235

5. Evaluate each expression. Use the rules for order of operations.

a. $9 - 3 * 2 =$ _____

b. $-7 * 6 \div (-3) =$ _____

c. $0.3 + 2^2 * 8 =$ _____

d. $11 - 2.2 * 4 + 7 =$ _____

e. $8 + \frac{1}{6} - 2 =$ _____

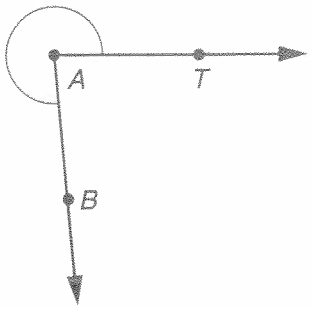
SRB 224 229

Date Time

Math Boxes 9.3

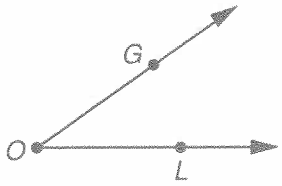
1. Measure the angles.

a.



Reflex $\angle BAT$ measures about _____ °.

b.



$\angle LOG$ measures about _____ °.

2. Divide.

4,791 / 24 → _____

3. Divide.

a. $\frac{3}{2} \div \frac{3}{9} =$ _____

b. $\frac{7}{8} \div \frac{2}{3} =$ _____

c. $\frac{5}{6} \div \frac{1}{5} =$ _____

d. $\frac{4}{7} \div \frac{9}{12} =$ _____

e. $6 \div \frac{3}{8} =$ _____

4. Circle the equation that describes the relationship between the numbers in the table.

$(x * 4) - 3 = y$

$(4 * x) + 3 = y$

$(y * 5) - 3 = x$

$(4 * y) + 3 = x$

x	y
$\frac{1}{4}$	−2
$\frac{1}{2}$	−1
4	13
10	37

5. Evaluate each expression. Use the rules for order of operations.

a. $8 + 5.5 * 7 =$ _____

b. $9 - 6^2 / 3 =$ _____

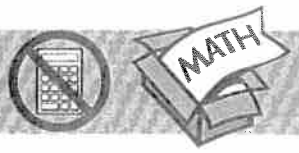
c. $6 * -4 / -2 =$ _____

d. $5 * 8 - (4 + 2 / 3) =$ _____

e. $4 - 10 + 7 * (-2) =$ _____

Date Time

Math Boxes 9.4



1. Frederick and Lucille conducted a survey to find out how many of their classmates had brothers and sisters. They surveyed 31 students and learned that 18 had at least one sister and 21 had at least one brother.

Draw a Venn diagram to represent the results of Frederick and Lucille's survey.

How many students had at least one brother and one sister? _____

2. Write >, <, or =.

a. $12 - (-3)$ _____ $\frac{7}{8} \div \frac{1}{20}$

b. $5^2 + 3^2$ _____ $5\frac{20}{3} + 10\frac{50}{10}$

c. $3\frac{6}{7} + 2\frac{3}{5}$ _____ $\frac{100}{18}$

d. $0.48 * 2.5$ _____ $3 * 0.26$

e. $-7 * -6$ _____ $-7 * 6$

3. Larry was reading a biography of Abraham Lincoln. He read 30 pages in 40 minutes.

a. How many pages did he read in 60 minutes?

_____

b. Write a proportion to solve the problem.

_____

4. Multiply. Write each answer in simplest form.

a. $4\frac{3}{7} * \frac{6}{5} =$ _____

b. $\frac{16}{11} * 4\frac{2}{3} =$ _____

c. $\frac{25}{4} * \frac{10}{6} =$ _____

d. $3\frac{1}{7} * 5\frac{8}{9} =$ _____

e. $7 * \frac{6}{15} =$ _____

5. Complete.

a. _____ = 80% of 80

b. _____ = 75% of 128

c. _____ = $66\frac{2}{3}$% of 189

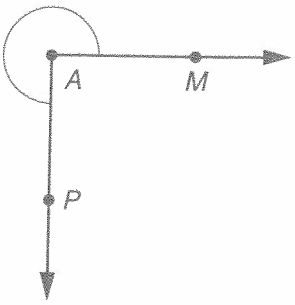
d. 60% of 255 = _____

e. 37.5% of 480 = _____

Date Time

Math Boxes 9.5

1. Measure the angles.



a. Reflex $\angle AMY$ measures about _____ °.

b. Reflex $\angle PAM$ measures about _____ °.

2. Multiply.

$254 * 38 =$ _____

3. Divide.

a. $\frac{4}{5} \div \frac{2}{7} =$ _____

b. $\frac{1}{9} \div \frac{5}{6} =$ _____

c. $\frac{2}{3} \div \frac{10}{7} =$ _____

d. _____ $= \frac{4}{9} \div \frac{8}{5}$

e. _____ $= 8 \div \frac{8}{7}$

4. Circle the equation that describes the relationship between the numbers in the table.

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

$4x + 12 = y$

$y = 0.4 + x$

$x = 4y + 0.4$

x	y
2	20
5	32
$\frac{1}{2}$	14
0.1	12.4

5. Evaluate each expression. Use the rules for order of operations.

a. $6 + 9 \div (-3) =$ _____

b. $15 + 2^2 - 8 \div 4 =$ _____

c. $9 * (6 + 2) - (-5) =$ _____

d. $7 + 3 * 4 + (-8) =$ _____

e. $(8 + 3) * -4 =$ _____

Date Time

Math Boxes 9.6

1. Find a kite on your Geometry Template. Use the template to draw a kite in the space to the right.

   How would you describe a kite?

   _____

   _____

   _____

   _____

SRB 156 157

2. Solve.

   Solution

   a. $\frac{15}{2} = \frac{y}{6}$ _____

   b. $\frac{x}{99} = \frac{10}{11}$ _____

   c. $\frac{144}{3} = \frac{x}{1}$ _____

   d. $\frac{24}{x} = \frac{80}{100}$ _____

   e. $\frac{50}{x} = \frac{18}{72}$ _____

SRB 111–113

3. Seven out of nine cards are faceup. If 16 cards are facedown, how many cards are there altogether?

   _____

   Explain how you found your answer.

   _____

   _____

   _____

   _____

SRB 116–118

4. The table at the right shows how much a person weighing 100 pounds on Earth would weigh on each of the planets in the solar system.

   a. On which planet would a person weigh about $\frac{1}{6}$ as much as on Mercury? _____

   b. On which planet would a person weigh about 3 times as much as on Mars?

   _____

   c. On which planet would a person weigh about $2\frac{1}{2}$ times as much as on Earth?

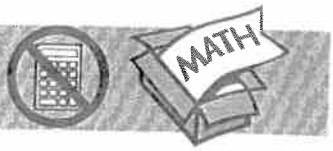
   _____

Planet	Weight (lb)
Mercury	37
Venus	88
Earth	100
Mars	38
Jupiter	264
Saturn	115
Uranus	93
Neptune	122
Pluto	6

SRB 239

Date Time

Math Boxes 9.8



1. Find a rhombus on your Geometry Template. Use the template to draw a rhombus in the space below.

   How would you describe a rhombus?

   _____

   _____

   _____

   _____

2. Solve.

   Solution

   a. $24 * f = 12$ _____

   b. $\frac{y}{15} = 3$ _____

   c. $n - 136 = 65$ _____

   d. $\frac{36}{q} = 3$ _____

   e. $\frac{2{,}000}{y} = 50$ _____

3. The ratio of facedown to faceup cards is 5:4. If there are 72 cards altogether, how many cards are faceup?

   _____

   Explain how you found your answer.

   _____

   _____

   _____

   _____

4. The table at the right shows how many calories per hour a person weighing 150 pounds uses for various activities.

   a. For which activity does the person use about $\frac{1}{6}$ of the number of calories used in running?

   _____

   b. For which activity does the person use about 2.5 times as many calories as when sleeping?

   _____

   c. For which activity does the person use about $\frac{2}{3}$ of the number of calories used in walking?

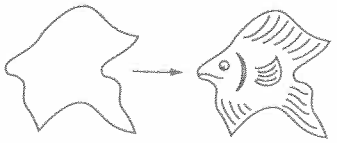
   _____

Activity	Calories Per Hour
Sleeping	60
Sitting	100
Standing	140
Driving	150
Walking	225
Volleyball	350
Basketball	500
Running	600

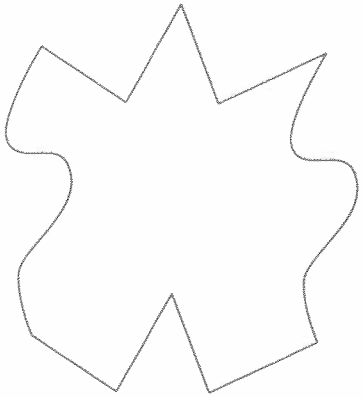
Date . Time

Math Boxes 9.9

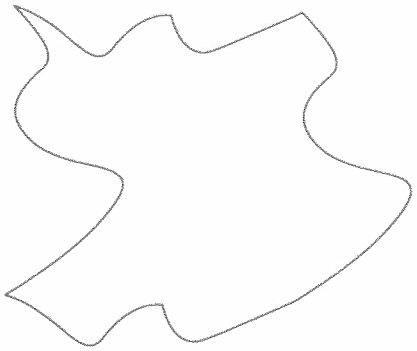
1. Fill in each shape so that it becomes a recognizable figure. See the example at the right.



a.



b.



2. a. Use a compass to draw a circle whose circumference is about 15.7 centimeters. Use the π key on a calculator or 3.14 as the value for π.

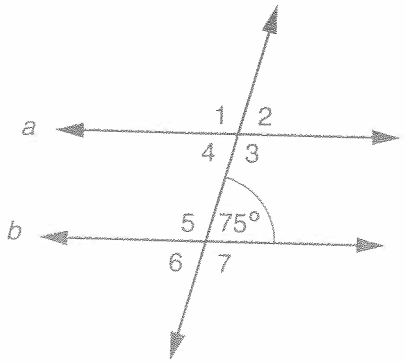
b. Describe what you did to solve the problem.

_____

_____

_____

3. Without using a protractor, find the measure of each numbered angle. Write each measure on the drawing. Lines *a* and *b* are parallel.



4. Add or subtract. Do not use a calculator. Write your answers in simplest form.

a. _____ $= \frac{3}{4} + 5\frac{5}{6}$

b. _____ $= 12 - (-2\frac{2}{3})$

c. _____ $= 15\frac{4}{5} - 20$

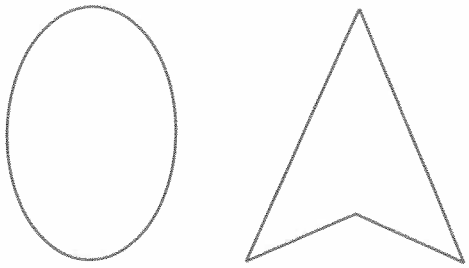
d. _____ $= 7\frac{11}{12} + \frac{25}{4}$

e. _____ $= 9\frac{3}{8} - 5\frac{3}{4}$

Date Time

Math Boxes 9.10

1. Draw the line(s) of symmetry for each figure below.



SRB 170

2. Use quick common denominators to decide which fraction is larger. Circle the larger one.

a. $\frac{6}{27}$ $\frac{1}{5}$

b. $\frac{4}{7}$ $\frac{27}{53}$

c. $\frac{9}{11}$ $\frac{74}{91}$

d. $\frac{19}{5}$ $\frac{46}{12}$

e. $\frac{8}{26}$ $\frac{5}{12}$

SRB 73

3. Multiply or divide.

a. $-150 / 15 =$ _____

b. $-16 * (-4) =$ _____

c. $20 * (-9) =$ _____

d. $-180 / 30 =$ _____

e. $360 / (-4) =$ _____

SRB 95

4. Use the distributive property. Show your work.

a. $7 * (30 - 3) =$ _____

b. $12 * (10 + 5) =$ _____

SRB 230 231

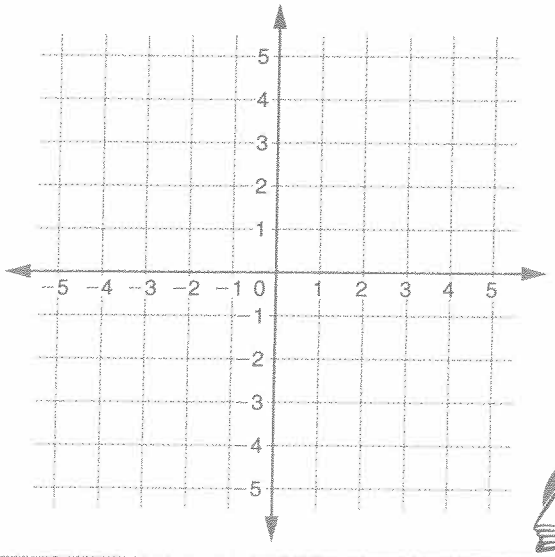
5. Follow the directions for the coordinate grid.

a. Mark point $(4, -2)$. Label it *A*.

b. Mark point $(-4, 2)$. Label it *B*.

c. Draw line segment *AB*.

d. Find the coordinates of the midpoint of $\overline{AB}$. (_____, _____)

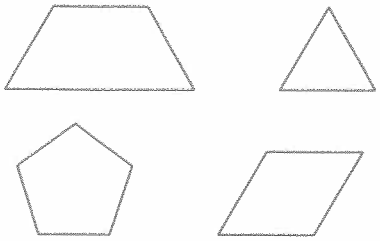


SRB 216

Date Time

Math Boxes 9.11

1. Circle all the regular polygons.



Explain why the circled figures are regular polygons.

_____

_____

_____

_____

SRB 152 153

2. Solve.

	Solution
a. $\frac{22}{m} = \frac{1}{2}$	_____
b. $0.25 * s = 64$	_____
c. $d * 10^2 = 420.5$	_____
d. $f * \frac{1}{8} = \frac{3}{16}$	_____
e. $\sqrt{h} = 20$	_____

SRB 233 234

3. When Marlene removed her dinner from the freezer, the temperature of the dinner was −10°C. She heated the dinner in the oven, and then put it on the table. It cooled to room temperature, 23°C, while she was talking on the phone.

How many degrees warmer was the dinner at room temperature than it was when removed from the freezer? _____

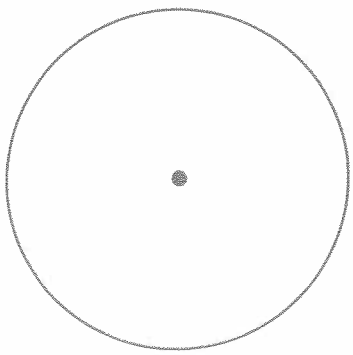
Write a number model to show how you found your answer.

_____

SRB 225

4. The table shows the results of a survey that asked people where they keep their computers at home. Fill in the missing information in the table. Use a protractor to make a circle graph of the results. Do not use the Percent Circle.

_____
(title)



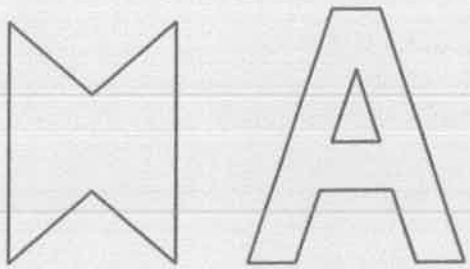
Location	Number of People	Percent of Total
Family room	20	
Bedroom	10	
Living room	8	
Home office	8	
Kitchen	2	
Basement	2	
Total		

SRB 141

Date Time

Math Boxes 9.12

1. Draw the line(s) of symmetry for each figure below.



2. Use quick common denominators to decide which fraction is larger. Circle the larger one.

a. $\frac{2}{15}$ $\frac{5}{31}$

b. $\frac{8}{41}$ $\frac{5}{22}$

c. $\frac{3}{62}$ $\frac{4}{75}$

d. $\frac{12}{39}$ $\frac{7}{19}$

e. $\frac{3}{16}$ $\frac{1}{6}$

3. Multiply or divide.

a. $-25 * 8 =$ _____

b. $-280 / -70 =$ _____

c. $-40 * -90 =$ _____

d. $540 \div (-6) =$ _____

e. $80 * -300 =$ _____

4. Use the distributive property. Show your work.

a. $5 * (25 + 40) =$ _____

b. $11 * (50 - 3) =$ _____

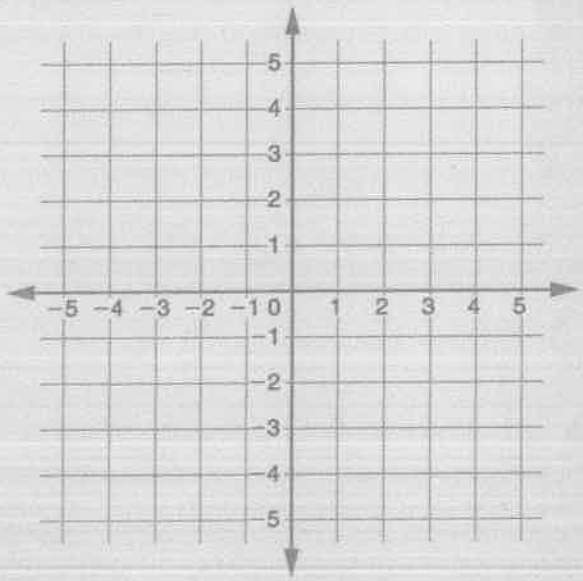
5. Follow the directions for the coordinate grid.

a. Mark point $(-4,3)$. Label it *M*.

b. Mark point $(5,3)$. Label it *A*.

c. Mark point $(4,-1)$. Label it *T*.

d. Mark point *H* so that the polygon *MATH* is a parallelogram. Draw parallelogram *MATH*.



Date Time

Math Boxes 10.1

1. Translate the word sentences below into number sentences. Do not solve or simplify them.

< means "is less than"
> means "is greater than"

a. Thirty times one half is equal to fifteen. _____

b. Ten more than the square root of sixty-four is equal to eighteen. _____

c. Nine increased by twelve is less than thirty. _____

d. Twenty-five more than three is greater than ten more than five. _____

e. Sixteen is greater than six more than four. _____

SRB 223

2. Solve.

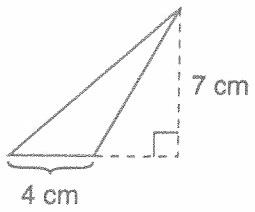
	Solution
a. $n - 54 = -29$	_____
b. $25 * y = 5$	_____
c. $v * 0.01 = 0.54$	_____
d. $376 / w = 94$	_____
e. $12 / b = -4$	_____

SRB 233

3. The formula for the area A of a triangle is

$$A = \frac{1}{2} * b * h$$

where b is the length of the base and h is the height. Use the formula to calculate the area of the triangle above.



Area _____

SRB 199

4. Multiply.

a.
$$\begin{array}{r} 5.67 \\ * \ 20.2 \\ \hline \end{array}$$

b.
$$\begin{array}{r} 443.6 \\ * \ 0.08 \\ \hline \end{array}$$

SRB 45 46

5. Multiply or divide. Write your answers in simplest form.

a. $3\frac{8}{9} * 4\frac{5}{6} =$ _____

b. _____ $= \frac{1}{5} * \frac{38}{3}$

c. _____ $= \frac{24}{15} \div \frac{1}{2}$

d. _____ $= \frac{3}{7} * \frac{22}{3}$

e. $\frac{24}{8} \div \frac{12}{7} =$ _____

SRB 86 89 90

Date Time

Math Boxes 10.2

1. Find the following measures for a circle with a radius of 3 cm.

   Diameter _____ cm

   Circumference About _____ cm

   Area About _____ cm^2

   Explain how you found the area.

   _____

   _____

   _____

SRB 195 200

2. Evaluate each expression. Use the rules for order of operations. Do not use a calculator.

   a. $15 - 3.3 * 4 =$ _____

   b. $\frac{20}{4} * 5 + (-8) * 2 =$ _____

   c. $7 * 3^2 - \frac{10}{2} =$ _____

   d. $8 * (2 + -5) - 4 =$ _____

   e. $0.01 + 0.01 * 10 + 0.01 =$ _____

SRB 229

3. Write each number in scientific notation.

   a. A modern personal computer can perform 10,000,000 mathematical operations,

      or _____ operations, in one second.

   b. A fiber-optic wire carries 1,700,000,000 bits per second, or _____ bits per second.

      This is equivalent to 25,000 people,

      or _____ people, speaking over a wire roughly the width of a human hair.

   c. An ant weighs about 0.00001 kilogram, or _____ kilogram.

   d. The approximate weight of the ocean is 1,320,000,000,000,000,000,000 kilograms,

      or _____ kilograms.

   e. One grass pollen weighs approximately 0.0000000047 gram,

      or _____ gram.

Sources: The World Almanac for Kids, 1996; The Sizesaurus

SRB 7 8

Date Time

Math Boxes 10.4

1. Translate the word sentences below into number sentences. Do not solve or simplify them.

< means "is less than"
> means "is greater than"

a. Five and one half is less than six. _____

b. Eighteen more than twelve is greater than two times seven. _____

c. One tenth times forty is equal to four. _____

d. Three more than fourteen divided by seven is equal to five. _____

e. Nine decreased by four is less than seventeen decreased by two. _____

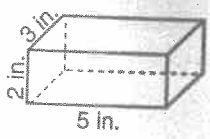
2. Solve.

	Solution
a. $15 * x = 60$	_____
b. $\frac{q}{10} = 150$	_____
c. $m + (-28) = -5$	_____
d. $\frac{36}{s} + 5 = 9$	_____
e. $-1 * t = -15$	_____

3. The formula for finding the volume of a rectangular prism is

$V = l * w * h$

where l is the length of the prism, w is the width, and h is the height. Use the formula to calculate the volume of this rectangular prism.



Volume _____

4. Multiply.

a.
$$\begin{array}{r} 6.76 \\ * \ 0.005 \\ \hline \end{array}$$

b.
$$\begin{array}{r} 14.09 \\ * \ 2.25 \\ \hline \end{array}$$

5. Multiply or divide. Write your answers in simplest form.

a. $1\frac{3}{7} * 2\frac{1}{5} =$ _____

b. $3\frac{6}{8} * \frac{28}{6} =$ _____

c. $5\frac{1}{10} \div 2\frac{5}{4} =$ _____

d. $\frac{46}{3} \div 20 =$ _____

e. $5\frac{3}{5} * \frac{1}{8} =$ _____

Date Time

Math Boxes 10.5

1. Find the following measures for a circle with a radius of 4 cm.

Diameter _____ cm

Circumference About _____ cm

Area About _____ cm^2

Explain how you found the circumference.

_____

_____

_____

2. Evaluate each expression. Use the rules for order of operations. Do not use a calculator.

a. $4 * \frac{7}{2} + 7 =$ _____

b. $8 + (-15) * 6 =$ _____

c. $\frac{6^2}{9} + 3 * 4 =$ _____

d. $8 + 7 - (-2) * 5 =$ _____

e. $12 / 6 + 9 * 3 =$ _____

3. Write each number in scientific notation.

a. There are about 12,000,000,000 chickens in the world,

or _____ chickens.

b. A trained tracking dog can follow the sweat scent left by a foot when only 0.00000000004 gram of sweat, or _____ gram, is present.

c. There are 60,000,000,000,000 cells, or _____ cells, in the body.

d. When a toilet is flushed, between 5,000,000,000 and 10,000,000,000 water droplets,

or between _____ and _____ water droplets,
are released into the air.

e. The smallest dust particles are about 0.01 centimeter, or _____ centimeter, in width.

Sources: The Top Ten of Everything, 1996; The Sizesaurus

Use with Lesson 10.5.

New Jersey Assessment of Skills and Knowledge

2007 Grade 6
MATHEMATICS REFERENCE SHEET

Use the information below to answer questions on the Mathematics section of the 2007 Grade Six Assessment of Skills and Knowledge (NJ ASK 6).

The sum of the measures of the interior angles of a triangle = 180°

Distance = rate × time

Simple Interest Formula: $A = p + prt$

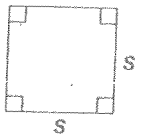
A = amount after t years; p = principal; r = annual interest rate; t = number of years

$\pi \approx 3.14$ or $\frac{22}{7}$

Square

Area = s^2

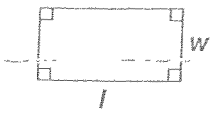
Perimeter = $4s$



Rectangle

Area = lw

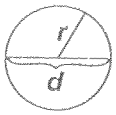
Perimeter = $2l + 2w$



Circle

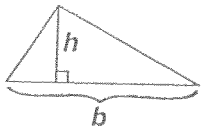
Area = πr^2

Circumference = $2\pi r$ = πd



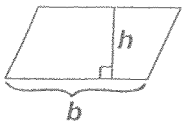
Triangle

Area = $\frac{1}{2}bh$



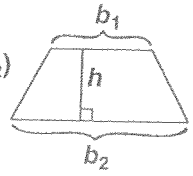
Parallelogram

Area = bh



Trapezoid

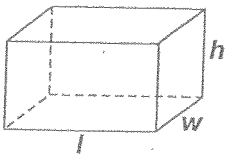
Area = $\frac{1}{2}h(b_1 + b_2)$



Rectangular Prism

Volume = lwh

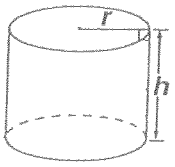
Surface Area = $2lw + 2wh + 2lh$



Cylinder

Volume = $\pi r^2 h$

Surface Area = $2\pi rh + 2\pi r^2$



USE THE FOLLOWING EQUIVALENTS FOR YOUR CALCULATIONS

60 seconds = 1 minute 60 minutes = 1 hour 24 hours = 1 day 7 days = 1 week 12 months = 1 year 365 days = 1 year	12 inches = 1 foot 3 feet = 1 yard 36 inches = 1 yard 5,280 feet = 1 mile 1,760 yards = 1 mile	10 millimeters = 1 centimeter 100 centimeters = 1 meter 10 decimeters = 1 meter 1000 meters = 1 kilometer
8 fluid ounces = 1 cup 2 cups = 1 pint 2 pints = 1 quart 4 quarts = 1 gallon 1000 milliliters (mL) = 1 liter (L)	16 ounces = 1 pound 2,000 pounds = 1 ton 1000 milligrams = 1 gram 100 centigrams = 1 gram 10 grams = 1 dekagram 1000 grams = 1 kilogram	