Weekly Activities for Students

Name: _____

Rising 7th Grade

Multiplying Decimals

Directions: Estimate each product. Then, use the standard algorithm to find each product.

Tip

When multiplying decimals, first estimate the product. The estimate will help you place the decimal correctly in your answer.

$1.2 \times 4.3 = ?$

Step 1

Estimate: $1 \times 4 = 4$
The product will be about 4.

Step 2

Multiply the factors as if they were whole numbers.
$12 \times 43 = 516$

Step 3

Place the decimal. The estimate was 4, so the decimal goes between the 5 and the 1.
$1.2 \times 4.3 = 5.16$

1. 45.7×5.3

Estimate: _____

Answer: _____

2. 312.64×43.2

Estimate: _____

Answer: _____

3. 55.16×9.09

Estimate: _____

Answer: _____

4. 637.2×8.49

Estimate: _____

Answer: _____

5. 32.04×65.87

Estimate: _____

Answer: _____

6. Alana had 9.6 barrels of apples. She gave 0.9 of what she had to Maurice. How many barrels of apples did Maurice get?

Estimate: _____

Answer: _____

Percent Problems

Directions: Solve each problem by converting the percent to a fraction. Show your work.

Tip

You can find a percent of a given number by changing the percentage to an equivalent fraction and then multiplying by the number.

Example:
Find 30% of 60:

$$\frac{30}{100} = \frac{3}{10}$$
$$\frac{3}{10} \times \frac{60}{1} = \frac{180}{10}$$
$$\frac{180}{10} = 18$$

1. Find 40% of 120: _____

$$\frac{40}{100} = \frac{4}{10}$$
$$\frac{4}{10} \times \frac{120}{1} = \frac{480}{10} = 48$$

2. Find 35% of 80: _____

3. Find 10% of 900: _____

4. Find 70% of 30: _____

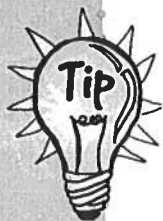5. Find 50% of 1,240: _____

6. Find 65% of 120: _____

7. Find 75% of 200: _____

8. Find 15% of 60: _____

Model Dividing Fractions

Directions: Use a bar model to find each quotient.

Tip

You can draw a bar model to divide fractions.

How many $\frac{5}{12}$-pint servings of yogurt are there in $\frac{5}{6}$ of a pint of yogurt?

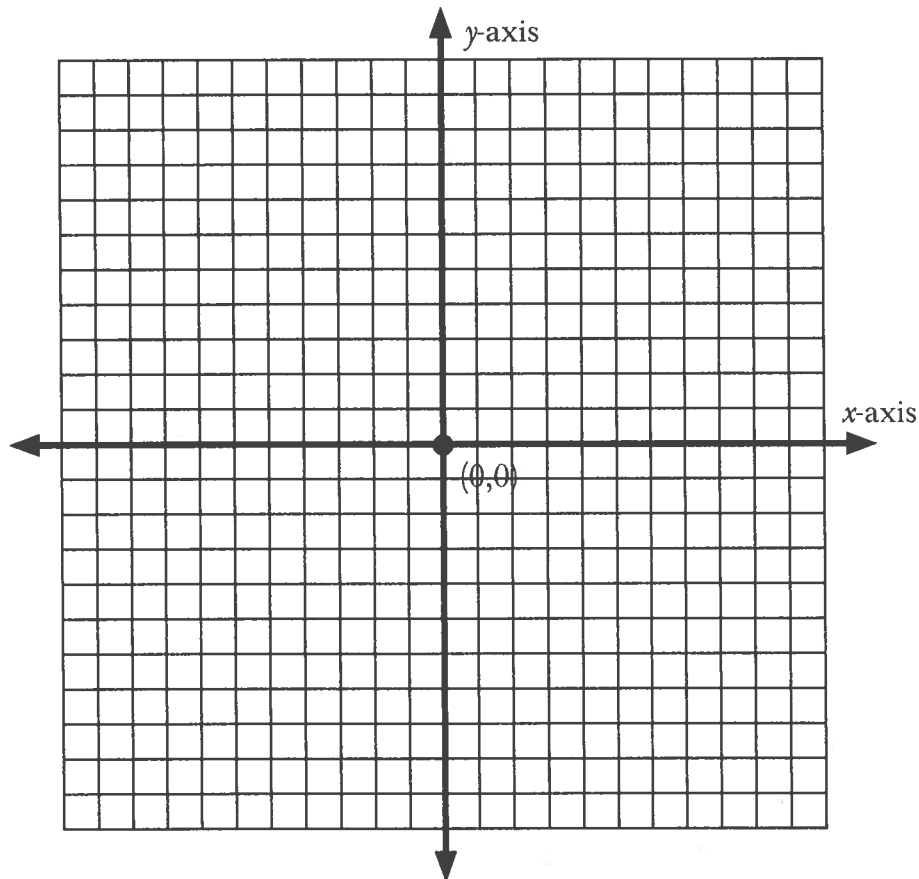| The expression	The model	The answer
$\frac{5}{6} \div \frac{5}{12}$	Show $\frac{5}{6}$. Mark the model in twelfths. Count the sets of five twelfths in $\frac{5}{6}$. $\frac{5}{12}$ $\frac{5}{12}$	There are two $\frac{5}{12}$-pint servings of yogurt in $\frac{5}{6}$ pint of yogurt. $\frac{5}{6} \div \frac{5}{12} = 2$
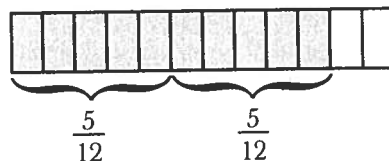
1. $\frac{4}{8} \div \frac{1}{2}$

2. $\frac{4}{6} \div \frac{1}{3}$

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

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

Treasure Hunt

Directions: Plot the ordered pairs on the coordinate plane.

(8, 0) ⟶ (8, 3) ⟶ (6, 5) ⟶ (4, 7) ⟶ (1, 10)
↓
(−6, 5) ⟵ (−5, 6) ⟵ (−3, 8) ⟵ (−1, 10) ⟵ (0, 11)
↓
(−8, 3) ⟶ (−8, 0) ⟶ (−8, −2) ⟶ (−8, −4) ⟶ (−8, −6)
↓
(2, −8) ⟵ (0, −8) ⟵ (−3, −8) ⟵ (−6, −8) ⟵ (−8, −8)
↓
(5, −8) ⟶ (8, −8) ⟶ (8, −6) ⟶ (8, −4) ⟶ (8, −2)

~~PEMDAS~~ Practice

Directions: Evaluate the expressions. Be sure to follow the order of operations.

Tip

Evaluate expressions in this order: PEMDAS

1. <u>P</u>arentheses: Do these operations first.

2. <u>E</u>xponents: Find these values next.

3. <u>M</u>ultiply and <u>D</u>ivide in order from left to right.

4. <u>A</u>dd and <u>S</u>ubtract in order from left to right.

1. $4^2 + 9 - (3 \times 5) =$ __**10**__

   $4^2 + 9 - 15$

   $16 + 9 - 15 = 10$

5. $8^2 + (4 \times 5) - 21 =$ _____

2. $6^2 - (9 \times 2) + 12 =$ _____

6. $(9 \times 5) - 2^3 + 16 =$ _____

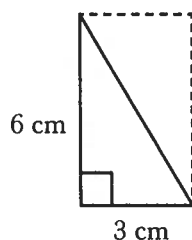3. $10 + (8 \times 3) - 3^2 =$ _____

7. $15 \div 5 + 7 - 2^2 =$ _____

4. $(8 \times 8) - 4^3 + 1 =$ _____

8. $(9 + 11) - 3^2 + 7 =$ _____

Area of a Right Triangle

Directions: Find the area of each triangle.

A *right triangle* has one 90° internal angle, or right angle. Any right triangle is half of a rectangle.
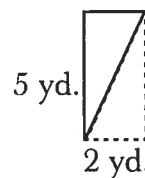
6 cm

3 cm

The area of a rectangle can be found by multiplying its length by its width. The area of a triangle is half the area of the rectangle formed by two of the triangles.
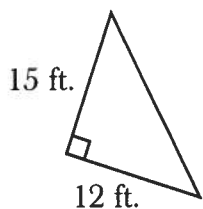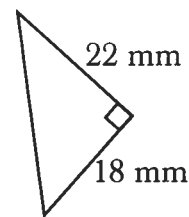
1.

5 ft.

12 ft.

$A =$ _____

3.

5 yd.

2 yd.

$A =$ _____

2.

15 ft.

12 ft.

$A =$ _____

4.

22 mm

18 mm

$A =$ _____
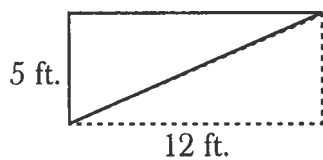
5. The formula for the area of a rectangle is *Area = length × width* ($A = lw$). Write a formula for finding the area of a triangle. _____
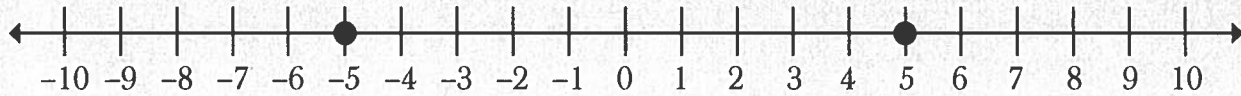
Integer Opposites

Directions: Determine the opposite of each integer. Plot each pair of opposite integers on a number line.
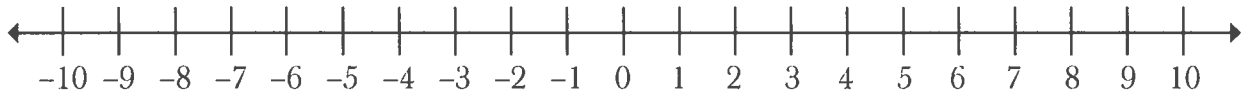
Tip

Integers include all whole numbers and their opposites. A *positive integer* is any integer greater than zero. For each positive integer, there is a *negative integer* that is its opposite. The opposite of a positive integer is written with a negative (or minus) sign in front of the number. Zero is neither positive nor negative, so it does not have an opposite.
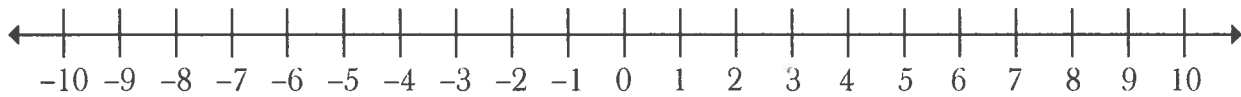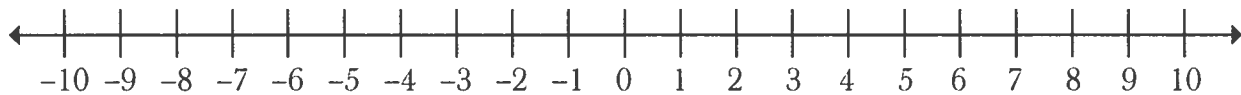
The opposite of 5 is negative 5, or −5.

$$-10 \quad -9 \quad -8 \quad -7 \quad -6 \quad -5 \quad -4 \quad -3 \quad -2 \quad -1 \quad 0 \quad 1 \quad 2 \quad 3 \quad 4 \quad 5 \quad 6 \quad 7 \quad 8 \quad 9 \quad 10$$

1. The opposite of 7 is _____.

$$-10 \quad -9 \quad -8 \quad -7 \quad -6 \quad -5 \quad -4 \quad -3 \quad -2 \quad -1 \quad 0 \quad 1 \quad 2 \quad 3 \quad 4 \quad 5 \quad 6 \quad 7 \quad 8 \quad 9 \quad 10$$

2. The opposite of −4 is _____.

$$-10 \quad -9 \quad -8 \quad -7 \quad -6 \quad -5 \quad -4 \quad -3 \quad -2 \quad -1 \quad 0 \quad 1 \quad 2 \quad 3 \quad 4 \quad 5 \quad 6 \quad 7 \quad 8 \quad 9 \quad 10$$

3. The opposite of 3 is _____.

$$-10 \quad -9 \quad -8 \quad -7 \quad -6 \quad -5 \quad -4 \quad -3 \quad -2 \quad -1 \quad 0 \quad 1 \quad 2 \quad 3 \quad 4 \quad 5 \quad 6 \quad 7 \quad 8 \quad 9 \quad 10$$

4. Explain how you know what the opposite of 25 would be:

_____

_____

The Better Bargain

Directions: Determine the better bargain, Brand A or Brand B. Circle the better bargain.

Item	Brand A	Brand B	Solution
1. flour	3 pounds for $7.25	1 pound for $2.50	Brand A: $7.25 ÷ 3 = $2.42 per pound
2. eggs	1 dozen for $1.25	18 eggs for $1.75	
3. milk	$\frac{1}{3}$ gallon for $3.00	1 gallon for $4.10	
4. rice	1 pound for $2.00	3 pounds for $6.10	
5. hot sauce	8 oz. for $2.35	12 oz. for $3.05	
6. apples	5-pound bag for $14.00	1-pound bag for $3.00	
7. ice cream	1 half-gallon for $4.40	2 half-gallons for $8.50	
8. orange juice	6 8-oz. bottles for $5.45	48-oz. bottle for $4.80	

Metric Conversions

Directions: Use ratio reasoning to convert each measurement.

💡 **Tip**

1 kilometer (km) = 1,000 meters (m)

1 meter = 100 centimeters (cm)

1 centimeter = 10 millimeters (mm)

1 kilogram (kg) = 1,000 grams (g)

1 gram = 1,000 milligrams (mg)

1 liter (L) = 1,000 milliliters (mL)

1. 95 m = _____9,500_____ cm

$$\frac{1\ m}{100\ cm} = \frac{95\ m}{9,500\ cm}$$

2. 20 km = _____ m

3. 500 cm = _____ mm

4. 0.5 km = _____ m

5. 4,120 cm = _____ m

6. 3.7 m = _____ cm

7. 87 cm = _____ m

8. 5 m = _____ mm

9. 4,600 m = _____ km

10. 1,500 mg = _____ g

11. 7 m = _____ cm

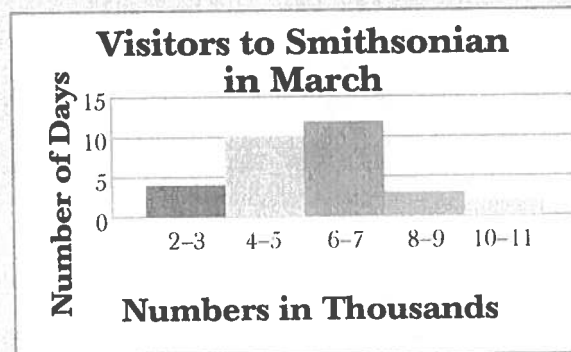**12.** 3.1 kg = _____ g

Histograms

Directions: Use the histogram below to answer the questions.

Tip

A *histogram* is a type of bar graph that displays numerical data that is organized into equal intervals.

In this histogram, "Visitors to Smithsonian in March," the number of visitors is divided into intervals by thousands: 2,000–3,000; 4,000–5,000, etc.

Notice these intervals are equally spread, and both the horizontal and vertical axes are labeled.

Visitors to Smithsonian in March

Number of Days (vertical axis: 0, 5, 10, 15)

Numbers in Thousands (horizontal axis: 2–3, 4–5, 6–7, 8–9, 10–11)

1. Over how many days was data collected? _____

2. On how many days did the Smithsonian see more than 4,000 visitors each day?

   _____

3. What is the greatest attendance recorded as represented by the data? _____

4. What other information can you learn from this histogram?

   _____

   _____

Inequalities

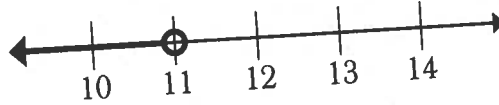**Directions:** Simplify each expression. Then, graph it on the number line.
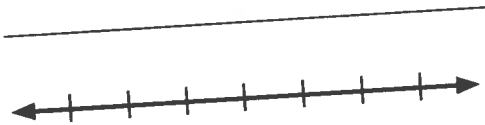
Example:

$x < 5 + 6$

$x < 11$

```
←———+———⊕———+———+———+———→
    10   11   12   13   14
```
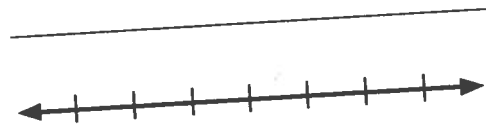
1. $5 + 11 < x$

```
←——+——+——+——+——+——+——+——→
```

2. $x > 16 - 7$

```
←——+——+——+——+——+——+——+——→
```

3. $x > 4 \times 5$

```
←——+——+——+——+——+——+——+——→
```

4. $6 + 19 < x$

```
←——+——+——+——+——+——+——+——→
```

5. $43 - 11 > x$

```
←——+——+——+——+——+——+——+——→
```

6. $x < 21 + 13$

```
←——+——+——+——+——+——+——+——→
```

7. $x < -6 + 4$

```
←——+——+——+——+——+——+——+——→
```
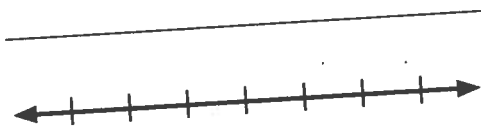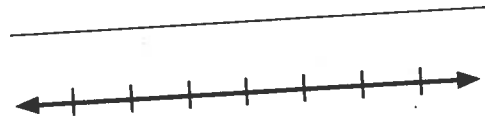
8. How many solutions are there for x in the problems on this page?

Graphing Equations

Directions: Fill in the missing values in the tables. Then, plot the ordered pairs and connect the points with a line.

Tip

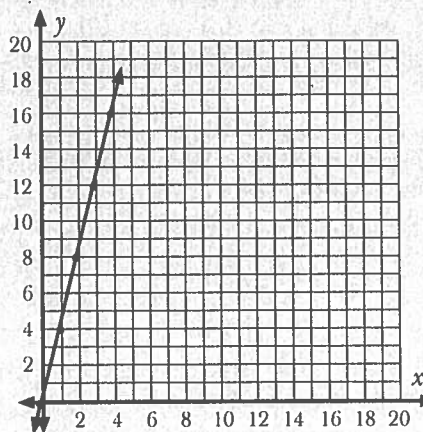You can plot pairs of values on the coordinate plane to visually represent their relationship.

Example:

$y = 4x$

x	y
1	4
2	8
3	12
4	16

Ordered Pairs

→ (1, 4)
→ (2, 8)
→ (3, 12)
→ (4, 16)

1. $y = x + 3$

x	y
2	5
3	
4	
5	

Ordered Pairs

→ (___, ___)
→ (___, ___)
→ (___, ___)
→ (___, ___)
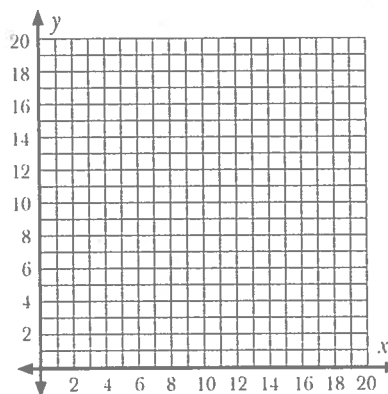
2. $y = 2x + 1$

x	y
1	3
2	
3	
4	

Ordered Pairs

→ (___, ___)
→ (___, ___)
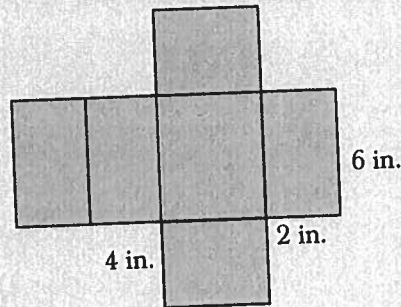→ (___, ___)
→ (___, ___)
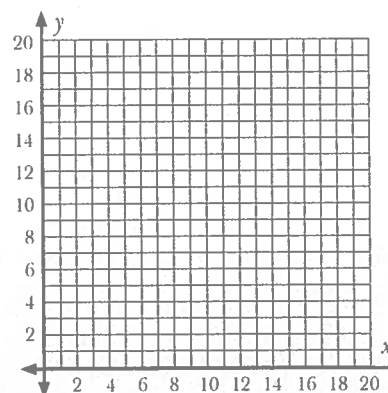
Surface Area

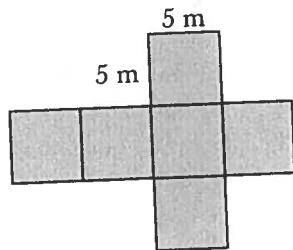**Directions:** Use the nets to find the surface area of each solid.

The *surface area* of a solid figure is the sum of the areas of each face.

A two-dimensional representation of a solid figure is called a *net*. A net is what a solid figure would look like if it were unfolded.
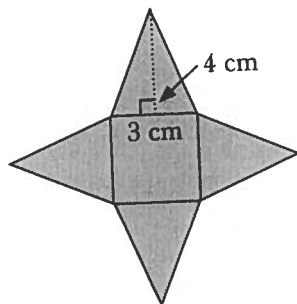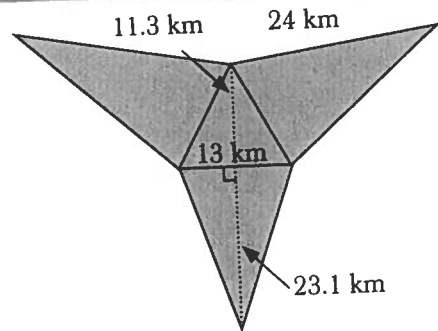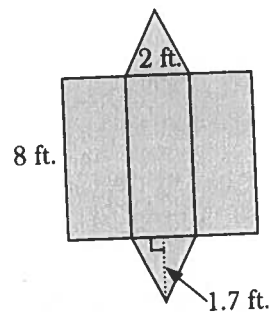
6 in.

2 in.

4 in.

1.

5 m

5 m

S = _____

2.

4 cm

3 cm

S = _____

3.

11.3 km   24 km

13 km

23.1 km

S = _____

4.

2 ft.

8 ft.

1.7 ft.

S = _____

Fun with Word Problems

Directions: Solve the problems. Show your work, and write a complete sentence to answer each question.

1. Ming has a piece of fabric that is $2\frac{1}{4}$ feet long. She divides it into 6 equal pieces. How long is each piece?

2. For a party, Hector bought a sandwich that is $5\frac{1}{2}$ feet long. He cuts it into 11 equal servings. How long is each piece?

3. Mr. Hernandez is filling a bookshelf with math textbooks. Each text is $2\frac{11}{16}$ inches wide. How many books will fit on a shelf that is 30 inches wide?

4. Saskia has $\frac{7}{8}$ of a cake. She wants to share it equally with two friends. How much of the cake will each person get?

5. Rayne has $2\frac{2}{7}$ cups of popcorn. She wants to split it into $\frac{2}{3}$-cup portions. How many portions will she have?

Decimals on a Number Line

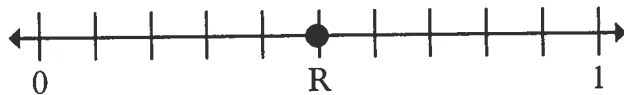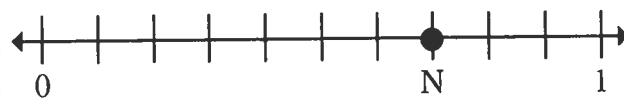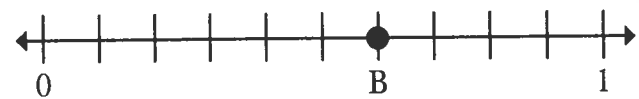**Directions:** Match the letter on the number line with the correct value to uncover the mystery message.

1.

0   E   1

2.

0   R   1

3.

0   N   1

4.

0   G   1

5.

0   I   1

6.

0   A   1

7.

0 E   1

8.

0   B   1

9.

0   N   1

Every expert was once

___   ___   ___   ___   ___   ___   ___   ___   ___ .
0.8   0.6   0.3   0.9   0.4   0.7   0.2   0.1   0.5