

**• Division Answers Ending with Zero**

- Sometimes the last whole digit in a division answer is zero.
  - Continue following the division steps until there are no more digits in the dividend to divide.
  - If the digit in the dividend cannot be divided, place a zero in the quotient above the digit.
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**Practice:**

1.  $3 \overline{)122}^0 \text{R}$

2.  $5 \overline{)204}^0 \text{R}$

3.  $6 \overline{)185}^0 \text{R}$

4.  $3 \overline{)242}^0 \text{R}$

5.  $4 \overline{)360}$

6.  $4 \overline{)83}^0 \text{R}$

7.  $5 \overline{)152}^0 \text{R}$

8.  $6 \overline{)304}^0 \text{R}$

**• Finding Information to Solve Problems**

- Some word problems might contain more information than you need to solve the problem.
  - Read all word problems carefully.
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***Practice:***

Read the word problems. Then answer the questions that follow.  
Remember to write the units.

Bernard went hiking on Sunday. He hiked for five hours from the trail entrance to Packsaddle Falls. It took Bernard four hours to hike back to the trail entrance. From the trail entrance to Packsaddle Falls is 10 miles.

1. How many hours did Bernard walk in all? \_\_\_\_\_
2. About how long did it take Bernard to walk one mile on the way to Packsaddle Falls? \_\_\_\_\_
3. How many miles did Bernard walk altogether? \_\_\_\_\_

Charisma went to the mall to buy birthday gifts for her twin cousins. She bought a video game for \$32. For her other cousin, she bought a scooter. Charisma spent \$89 altogether.

4. How much did Charisma spend on the scooter? \_\_\_\_\_
5. How much more did it cost than the video game? \_\_\_\_\_
6. If Charisma had bought two video games for \$38 each and a scooter, how much would she have spent? \_\_\_\_\_

Taryn's choir group is planning a trip for the state competition. The bus ride will take 8 hours each way. When they arrive they will wait for 2 hours before performing. Their performance lasts 1 hour. They will eat dinner and return to the bus 2 hours after their performance.

7. How many hours does Taryn's choir spend on the bus altogether? \_\_\_\_\_
8. How many hours do they spend at the competition? \_\_\_\_\_
9. How many total hours is the trip? \_\_\_\_\_

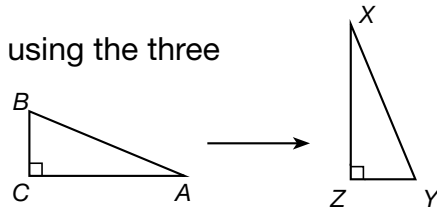
**• Geometric Transformations**

- Slides, turns, and flips are three ways of moving figures. In geometry, we call these movements **transformations**.

**Transformations**

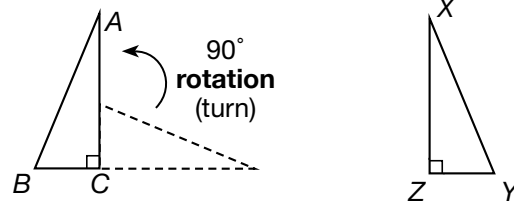
Movement	Name
Slide	Translation
Turn	Rotation
Flip	Reflection

**Example:** Position triangle ABC on triangle XYZ using the three transformations.

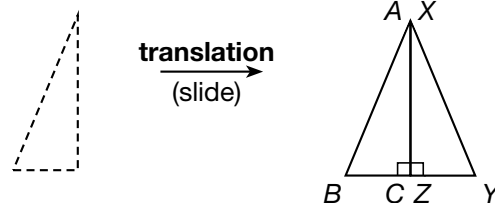


**Solution:**

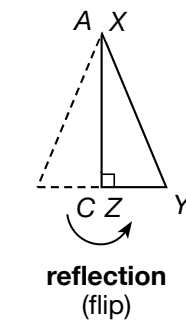
1. Rotation: **Turn** triangle ABC about point C.



2. Translation: **Slide** triangle ABC to the right.



3. Reflection: **Flip** triangle ABC over line AC.



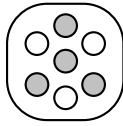
**Practice:**

1. What is the math term for a turn? \_\_\_\_\_
2. What is the math term for a slide? \_\_\_\_\_
3. What is the math term for a flip? \_\_\_\_\_

### • Fraction of a Set

- A set is a group of similar things.
- We can use fractions to describe a number of things in a set (group).

#### Example:

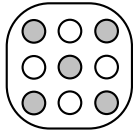


$$\frac{4}{7}$$

Four circles are shaded.  
There are seven circles in all.  
Four out of seven are shaded.

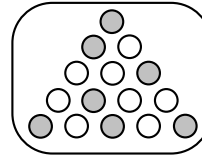
#### Practice:

1. What fraction of the set is shaded?



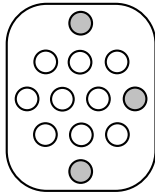
\_\_\_\_\_

2. What fraction of the set is not shaded?



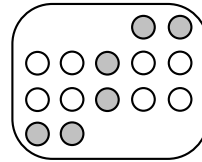
\_\_\_\_\_

3. What fraction of the set is shaded?



\_\_\_\_\_

4. What fraction of the set is not shaded?



\_\_\_\_\_

5. There are 29 students in class. There are 16 girls and 13 boys. What fraction of the class is boys? \_\_\_\_\_

6. What fraction of the letters in ONOMOTOPOEIA are Os? \_\_\_\_\_

7. When preparing for the photography competition, Richard took 61 pictures. If 32 were color pictures, what fraction of the pictures were black and white?  
\_\_\_\_\_

8. Meredith was making bracelets for her friends. She made 17 bracelets, 8 of which were for her friends in art. What fraction of the bracelets are for friends not in Meredith's art class? \_\_\_\_\_

• **Measuring Turns**

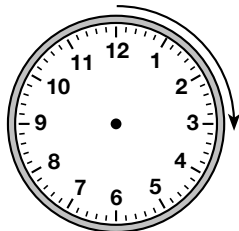
- Turns can be measured in **degrees**.

A **full turn** is  $360^\circ$ .

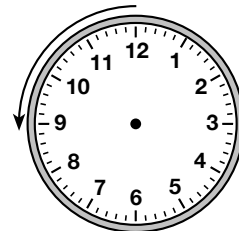
A **half turn** (a turn to face the opposite direction) is  $180^\circ$ .

A **quarter turn** is  $90^\circ$ .

- **Clockwise** turns go in the same direction as the hands of a clock.
- **Counterclockwise** turns go in the opposite direction as the hands of a clock.

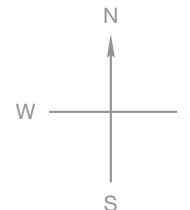


Clockwise turn

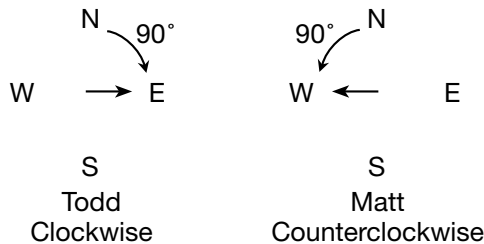


Counterclockwise turn

**Example:** Todd and Matt were both facing north. Todd turned  $90^\circ$  clockwise and Matt turned  $90^\circ$  counterclockwise. After turning, in which directions were the boys facing?



**Solution:** Todd was facing east and Matt was facing west. Below are the turns Todd and Matt made.



**Practice:**

1. Sara walked out the door. Then she turned and walked back into the house to get a jacket. About how many degrees did she turn?
2. Rolf walked north on First Avenue, then turned right on Lemon Street. Did Rolf turn clockwise or counterclockwise? About how many degrees did he turn?

• **Division with Three-Digit Answers**

- With long division, remember there are four steps: divide, multiply, subtract, and “bring down.”

$$\begin{array}{r} 223 \text{ R}3 \\ 4 \overline{)8915} \end{array}$$

- Continue following the division steps until there are no more digits in the dividend to divide. Write any amount “left over” as the remainder.

**Practice:**

Divide.

1.  $4 \overline{)967} \text{ R}$

2.  $5 \overline{) \$8.65} \text{ R}$

3.  $6 \overline{) 1814} \text{ R}$

4.  $8 \overline{) \$70.00} \text{ R}$

5.  $4 \overline{) 3402} \text{ R}$

6.  $3 \overline{) 200} \text{ R}$

7.  $2 \overline{) 1111} \text{ R}$

8.  $6 \overline{) 7017} \text{ R}$

**• Mass and Weight****U.S. Customary Units of Weight**

- The units of weight in the U.S. Customary System are **ounces** (oz), **pounds** (lb), and **tons** (tn).

$16 \text{ oz} = 1 \text{ lb}$ $2000 \text{ lb} = 1 \text{ ton}$
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A box of cereal weighs about 24 ounces.

Some students weigh 98 pounds.

A car might weigh a ton or more.

**Metric Units of Mass**

- **Grams** (g) and **kilograms** (kg) are metric units of mass.

$1000 \text{ g} = 1 \text{ kg}$
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Your textbook has a mass of about 1 kilogram.

One dollar bill has a mass of about 1 gram.

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**Practice:**

Remember to write the units.

1. An adult elephant can weigh up to 12,000 pounds. How many tons is that?  
\_\_\_\_\_

2. Beka weighed 7 pounds when she was born. How many ounces is 7 pounds?

$$1 \text{ lb} = 16 \text{ oz} \quad 7 \text{ lb} = \text{_____} \text{ oz}$$

3. What would be the most reasonable measurement for a handful of raisins?

**A** 30 oz






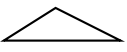
**B** 30 g

**C** 30 kg

**D** 30 lbs

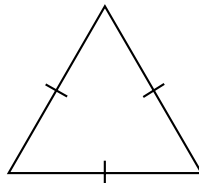
4. One penny has a mass of about 2 grams. What would be the approximate mass of a stack of 50 pennies? \_\_\_\_\_

## • Classifying Triangles

Classifying Triangles					
by <u>Sides</u>			by <u>Angles</u>		
Type	Characteristic	Example	Type	Characteristic	Example
<b>Equilateral triangle</b>	Three sides of equal length		<b>Acute triangle</b>	All acute angles	
<b>Isosceles triangle</b>	At least two equal sides		<b>Right triangle</b>	One right angle	
<b>Scalene triangle</b>	Three sides of unequal length		<b>Obtuse triangle</b>	One obtuse angle	

### Practice:

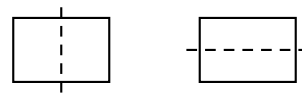
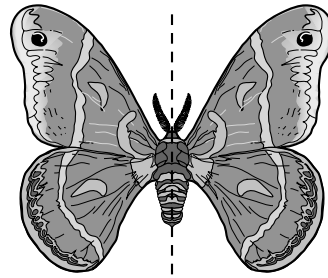
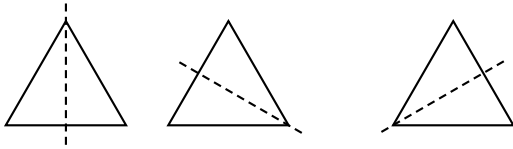
- Can a triangle have only two angles? Why or why not? \_\_\_\_\_  
\_\_\_\_\_
- What is the name for a triangle that has three unequal sides?  
\_\_\_\_\_
- What is the name for a triangle that has three equal sides? \_\_\_\_\_
- What is the name for a triangle that has a  $110^\circ$  angle? \_\_\_\_\_
- What is the name for a triangle that has a  $90^\circ$  angle? \_\_\_\_\_
- If one side of an equilateral triangle is 8 inches, what is the perimeter of the triangle? Remember to write the units.  
\_\_\_\_\_
- If one side of a scalene triangle is 6 inches, can we find its perimeter? Why or why not?  
\_\_\_\_\_
- What do the marks on the sides of the triangle mean? \_\_\_\_\_





• **Symmetry**

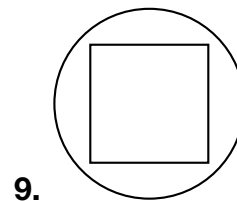
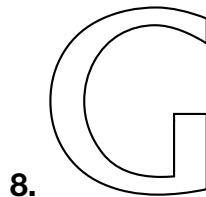
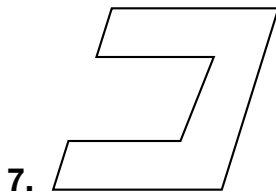
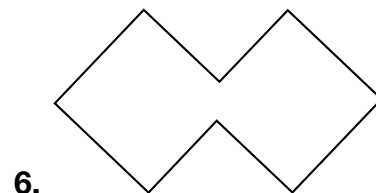
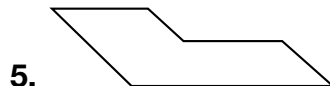
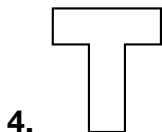
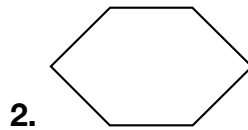
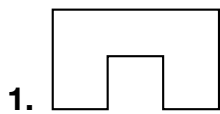
- A **line of symmetry** divides a figure in half so that the halves are mirror images of each other.



- A polygon or other figure can have more than one line of symmetry.

**Practice:**

Draw lines of symmetry, if any. Write “none” if there are no lines of symmetry.



• **Division with Zeros in Three-Digit Answers**

- Use the division steps (divide, multiply, subtract, “bring down”) as you did for division with zeros in the two-digit answers, but continue until every digit in the dividend is used.
- Place a digit above each digit.
- Use zero as a placeholder.
- Any amount “left over” becomes the remainder.
- Use mental math to divide when possible.

$$8 \overline{)3200} \quad \text{Think: } 8 \overline{)32}, \text{ so } 8 \overline{)3200}$$

**Practice**

Divide.

1.  $3 \overline{)542} \text{ R}$

2.  $3 \overline{)6019} \text{ R}$

3.  $4 \overline{)2671} \text{ R}$

4.  $4 \overline{)303} \text{ R}$

5.  $5 \overline{)4122} \text{ R}$

6.  $6 \overline{)1991} \text{ R}$

Use mental math to divide.

7.  $3 \overline{)1800}$

8.  $3 \overline{)2700}$

9.  $3 \overline{)45,000}$