**Unit 7 - Angles**

Lesson 1: Complementary Angles.  
Objective: Today we will find missing angle measurements involving complementary angles.  
Standard: 8.G. 5

**Complementary Angles**

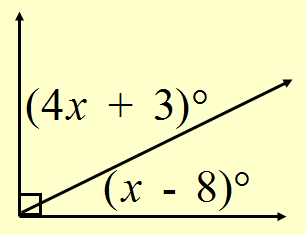
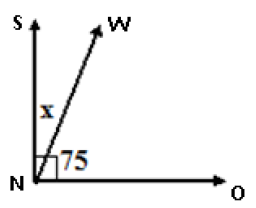
**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** angles add up to equal .

Complementary angles do not have to be \_\_\_\_\_\_\_\_\_\_ (next to each other) for them to be complementary.



Try These:

1. Complementary angles are two angles whose sum is \_\_\_\_\_\_\_
2. Complementary angles form what type of angle? \_\_\_\_\_\_\_
3. What is the complement of a 40 degree angle? \_\_\_\_\_\_\_
4. What is the complement of a 4 degree angle? \_\_\_\_\_\_\_
5. What is the complement of ? \_\_\_\_\_\_\_
6. What is the complement of ? \_\_\_\_\_\_\_

Solve for by setting up an equation

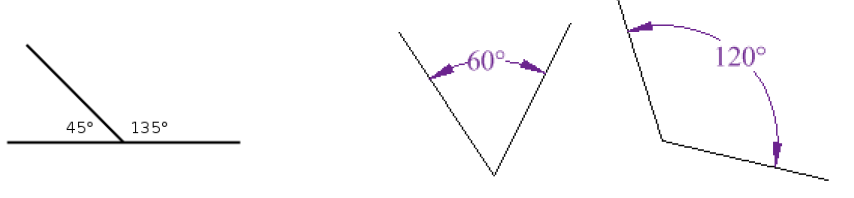
Lesson 2: Supplementary Angles.  
Objective: Today we will find missing angle measurements involving supplementary angles.  
Standard: 8.G.5

**Supplementary Angles**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** angles add up to equal .

An angle that equals is called a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

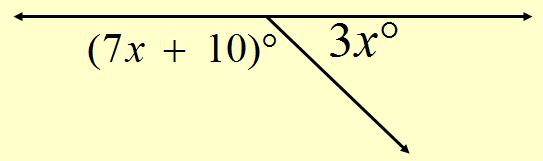
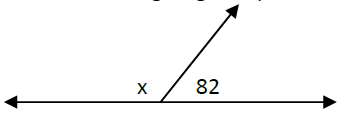
Supplementary angles do not have to be adjacent for them to be supplementary.



Try These:

1. Supplementary angles are two angles whose sum is \_\_\_\_\_\_\_
2. Supplementary angles form what type of angle? \_\_\_\_\_\_\_
3. What is the supplement of a 40 degree angle? \_\_\_\_\_\_\_
4. What is the supplement of a 4 degree angle? \_\_\_\_\_\_\_
5. What is the supplement of ? \_\_\_\_\_\_\_
6. What is the supplement of ? \_\_\_\_\_\_\_

Find the missing angles by setting up an equation.

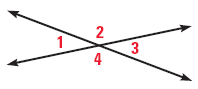


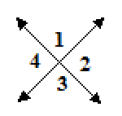
Lesson 3: Vertical Angles.  
Objective: Today we will find missing angle measurements involving vertical angles.  
Standard: 8.G.5

**Vertical Angles**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** are opposite angle pairs formed by two intersecting lines.

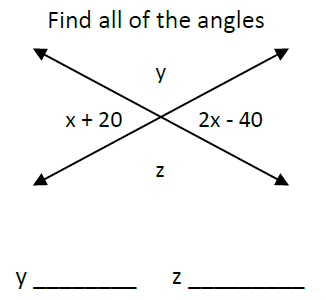
Vertical angles are **\_\_\_\_\_\_\_\_\_\_\_**.

   
 are vertical angles  
   
 are vertical angles

Use the picture to the right:

1. Name an angle congruent to angle 1 \_\_\_\_\_\_\_
2. Name an angle supplementary to angle 1 \_\_\_\_\_\_\_
3. If angle 1 = , then: , , \_

**Example:**



Lesson 4: Angle Relationships  
Objective: Today we will find missing angle measurements involving parallel lines cut by a transversal.  
Standard: 8.G.5

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** are lines that do not   
 intersect.  
  
 A **\_\_\_\_\_\_\_\_\_\_\_\_\_\_** is a line that crosses two   
 or more parallel lines.

1

4

2

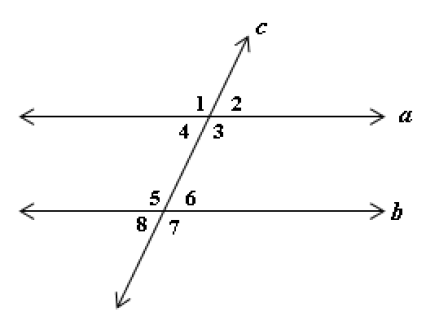
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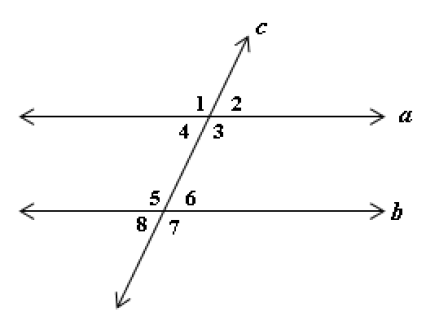
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8

3

* Angles that are in the same position on both parallel lines are congruent. (\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_)
* Angles that share a side (next to each other) are supplementary.
* Angles that are across from each other are vertical angles.

Use the diagram to answer the questions:

1. Lines and are \_\_\_\_\_\_\_\_\_\_\_
2. Line is called the \_\_\_\_\_\_\_\_\_\_\_\_
3. Name a pair of vertical angles \_\_\_\_\_ & \_\_\_\_\_
4. Name a pair of corresponding angles  
   \_\_\_\_\_ & \_\_\_\_\_
5. Name a pair of supplementary angles   
   \_\_\_\_\_ & \_\_\_\_\_
6. Name a pair of congruent angles \_\_\_\_ & \_\_\_\_\_
7. True or False: ? \_\_\_\_\_
8. True or False: ? \_\_\_\_\_
9. True or False: ? \_\_\_\_\_
10. True or False: ? \_\_\_\_\_
11. If , then:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

1. If , then:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

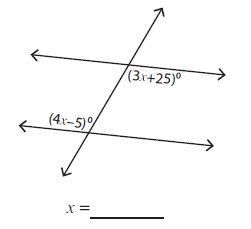
\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

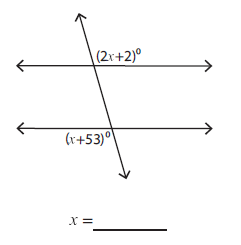
\_\_\_\_\_

Lesson 5: Angle Relationships  
Objective: Today we will find missing angle measurements involving parallel lines cut by a transversal.  
Standard: 8.G.5



1. Find the value of .

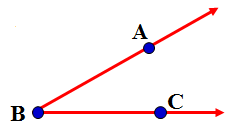
What are the measurements of the two angles?  
\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_

1. Find the value of

What are the measurements of the two angles?

\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_

Lesson 6: Interior Angles of a Triangle  
Objective: Today we will find the measure of an interior angle of a triangle.  
Standard: 8.G. 5

**Naming Angles:**

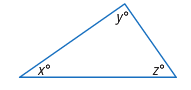
We name angles using 3 points.  
The vertex must be the middle letter.

The angle can be named:



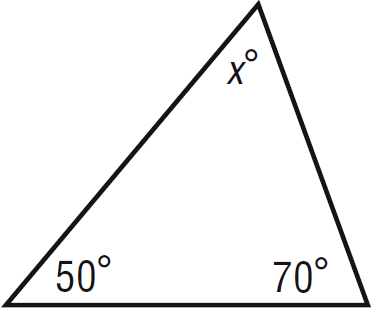
**Interior Angles of a Triangle**

* A **\_\_\_\_\_\_\_\_\_\_** is a three sided polygon.
* An angle that lies inside a triangle is called an **\_\_\_\_\_\_\_\_\_\_\_\_\_**.

The sum of the measures of the   
interior angles of a triangle is .

**Example:**

Find the value of in the diagram.



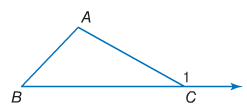
Lesson 7: Exterior Angles of a Triangle  
Objective: Today we will find the measure of an exterior angle of a triangle.  
Standard: 8.G. 5

**Exterior Angles of a Triangle**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** are interior angles that are not **\_\_\_\_\_\_\_\_** to the exterior angle.

The **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** states that the exterior angle of a triangle is equal to the sum of its two remote interior angles.

**Examples:**

1.  If and find
2. Suppose . Find the measure of .

