

ML #1 - Angle Information (Unit 9 - Math 7 Plus)

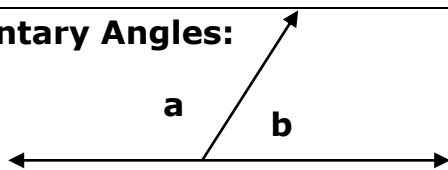
Part I: Fill in the vocabulary chart with a definition and a picture.

Acute Angle	
Obtuse Angle	
Straight Angle	
Right Angle	
Complementary Angles	
Supplementary Angles	
Ray	
Angle	
Line	
Line Segment	
Vertex	
Adjacent Angles	

Part II: Missing Angle Measurements

- The idea is to use our knowledge of geometry and algebra to find missing angle measures.

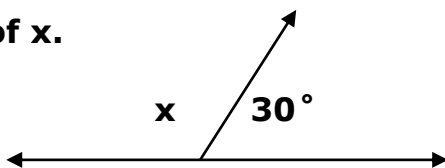
Supplementary Angles:



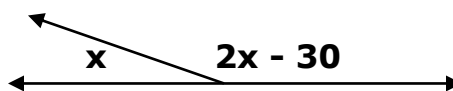
$\angle a$ is the supplement of $\angle b$
 $\angle b$ is the supplement of $\angle a$

EXAMPLES:

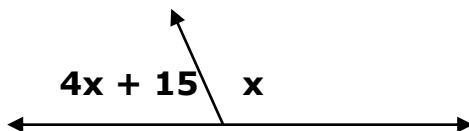
- 1) Find the value of x .



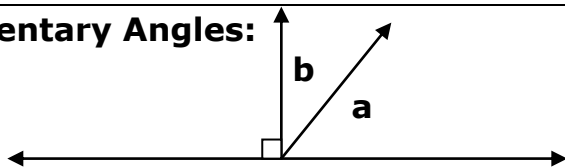
- 2) Find the value of x .



- 3) Find the value of x .



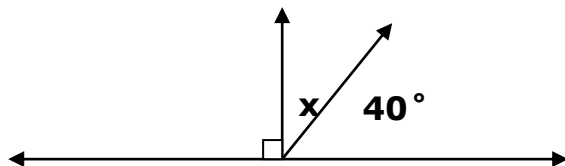
Complementary Angles:



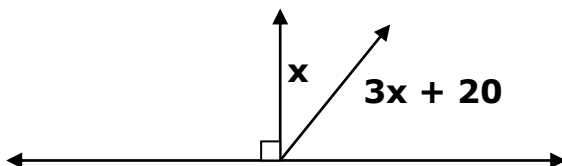
$\angle a$ is the complement of $\angle b$
 $\angle b$ is the complement of $\angle a$

EXAMPLES:

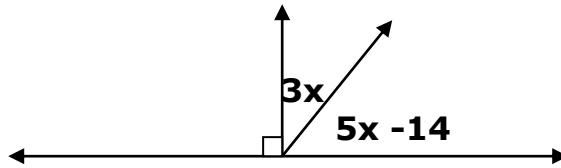
- 1) Find x .



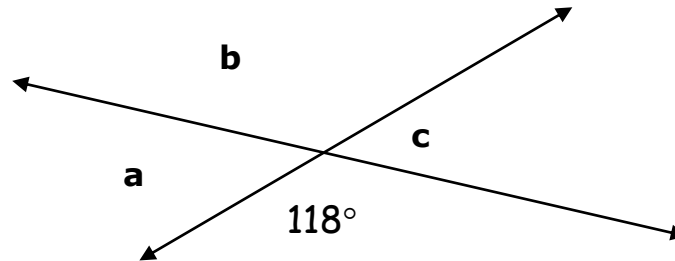
- 2) Find x .



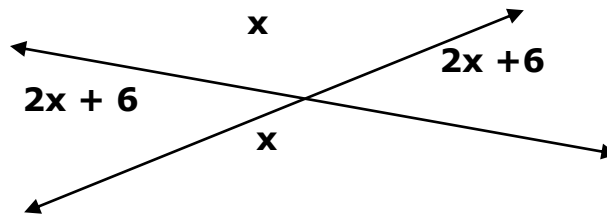
3) Find x .



6) Find the missing measurements.

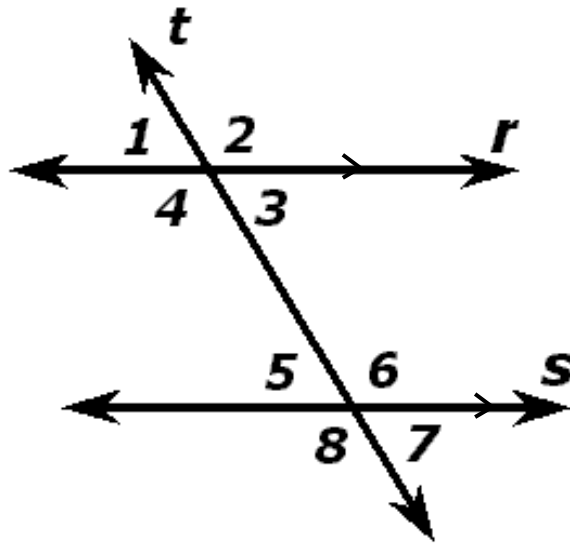


7) Find the missing measurements.



Part III: Parallel Lines

Parallel lines	Lines that lie in the same plane but never intersect	
Transversal	A line that cuts through two or more parallel lines	
Congruent angles	Angles that have the same measure	
Corresponding angles	Angles in the same position on parallel lines with a transversal; they are <u>congruent</u>	
Alternate interior angles	Pairs of angles between parallel lines & on either side of a transversal; they are <u>congruent</u>	
Alternate exterior angles	Pairs of angles outside parallel lines on either side of a transversal; they are <u>congruent</u>	
Vertical angles	Opposite angles formed when two lines intersect; they are <u>congruent</u>	
Supplementary angles	Two angles whose measures add up to 180°	



Name all pairs of

Corresponding Angles:

Alternate Interior Angles:

Alternate Exterior Angles:

Vertical Angles:

Supplementary Angles:

Example: In the above example line r and s are parallel and cut by a transversal, line t . If $\angle 3$ is 68° , use what you know to find the measures of the rest of the angles in the diagram above.

$\angle 1$ _____

$\angle 5$ _____

$\angle 2$ _____

$\angle 6$ _____

$\angle 3$ _____

$\angle 7$ _____

$\angle 4$ _____

$\angle 8$ _____

Example: A line passes through 2 sides of a rectangle. The measure of $\angle 2$ is 45° . What is the measure of the other angles?

$\angle 1$ _____

$\angle 5$ _____

$\angle 2$ _____

$\angle 6$ _____

$\angle 3$ _____

$\angle 7$ _____

$\angle 4$ _____

$\angle 8$ _____

