

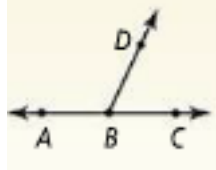
Name: \_\_\_\_\_  
 Geometry \_\_\_\_\_

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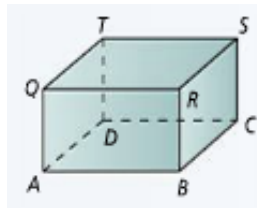
## Tools of Geometry Study Guide

**LT#1:** Understand basic terms and postulates of geometry.

Name all the segments and rays in the figure.



Use the figure below for 1-3.



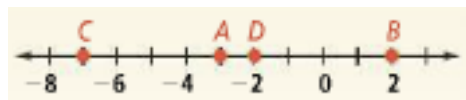
1. Name two intersecting lines.
2. Name the intersection of planes  $QRBA$  and  $TSRQ$ .
3. Name three noncollinear points.

Determine whether the statement is *true* or *false*. Explain your reasoning.

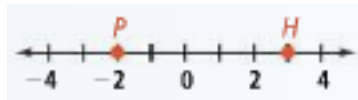
4. Two points are always collinear.
5.  $\overrightarrow{LM}$  and  $\overrightarrow{ML}$  are the same ray.

**LT#2:** Find and compare lengths of segments.

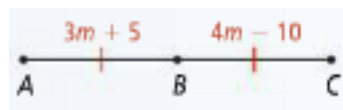
6. Are  $\overline{AB}$  and  $\overline{CD}$  congruent?



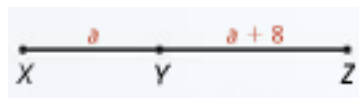
Use the number line below for 2-3.



7. Find two possible coordinates of  $Q$  such that  $PQ = 5$ .
8. Use the number line above, Find the coordinate of the midpoint of  $\overline{PH}$ .
9. Find the value of  $m$ .

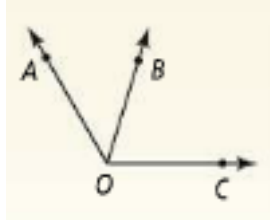


10. If  $XZ = 50$ , what are  $XY$  and  $YZ$ ?

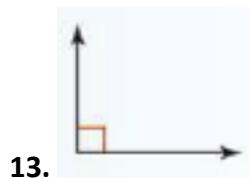
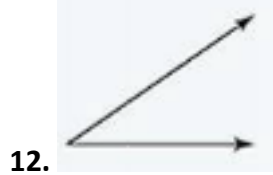


**LT#3:** Find and compare the measures of angles.

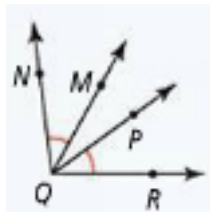
11. If  $m\angle AOB = 47$  and  $m\angle BOC = 73$ , find  $m\angle AOC$ .



Classify each angle as *acute*, *right*, *obtuse*, or *straight*.



Use the diagram for 4 and 5.

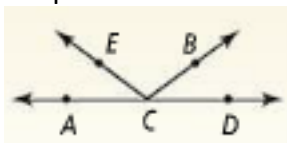


14. If  $m\angle MQR = 61$  and  $m\angle MQP = 25$ , find  $m\angle PQR$ .

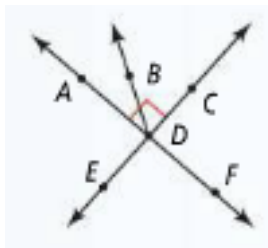
15. If  $m\angle NQM = 2x + 8$  and  $m\angle PQR = x + 22$ , find the value of  $x$ .

**LT#4:** Identify special angle pairs and use their relationship to find angle measures.

16. Are  $\angle ACE$  and  $\angle BCD$  vertical angles? Explain.

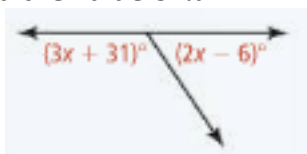


Name each pair of the following.

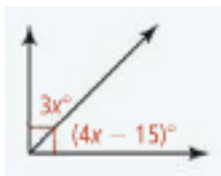


- 17. Complementary angles
- 18. Supplementary angles
- 19. Vertical angles
- 20. Linear pair

Find the value of  $x$ .



21.



22.

**LT#6:** Find the midpoint of a segment.

23.  $\overline{GH}$  has endpoints  $G(-11,6)$  and  $H(3,4)$ . What are the coordinates of its midpoint  $M$ ?

$\overline{AB}$  has endpoints  $A(-3, 2)$  and  $B(3, -2)$ .

24. Find the coordinates of the midpoint of  $\overline{AB}$ .

$M$  is the midpoint of  $\overline{JK}$ . Find the coordinates of  $K$ .

25.  $J(-8,4), M(-1,1)$

26.  $J(9, -5), M(5,2)$

27.  $J(0,11), M(-3,2)$

**LT#7:** Find the distance between two points in the coordinate plane.

Find the distance between the points to the nearest tenth.

28.  $A(-1,5), B(0,4)$

29.  $C(-1, -1), D(6,2)$

30.  $E(-7,0), F(5,8)$

$\overline{AB}$  has endpoints  $A(-3, 2)$  and  $B(3, -2)$ .

31. Find  $AB$  to the nearest tenth.