

- What is the definition of the Segment Addition Postulate? Draw a diagram and give an equation that represents it.
- What is the definition of the Angle Addition Postulate? Draw a diagram and give an equation that represents it.

Vocabulary: *Midpoint, angle, acute angle, right angle, obtuse angle, straight angle, vertical angle, adjacent angle, complementary angle, supplementary angle.*

Use the line segment below for questions 1 – 3.

1. If M is the midpoint of $\overline{LN}$, find x if $LM = 4x - 3$ and $MN = 5x - 10$.

x = _____

2. Find LM if $MN = 7$ and $LN = 16$.

LM = _____

3. If $LN = 28$, $LM = 2x - 1$ and $MN = 3x + 4$, find x, LM and MN.

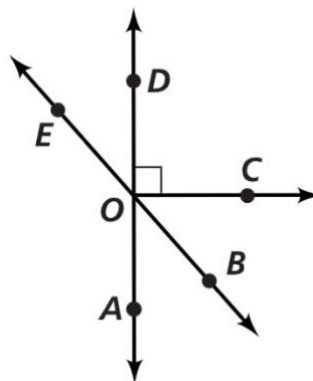
x = _____

LM = _____

MN = _____

Use the diagram at the right to answer questions 4 – 9.

4. Name a pair of vertical angles.
5. Name a right angle.
6. Name an angle that is supplementary to $\angle DOE$.
7. Name an angle that is complementary to $\angle AOB$.
8. Name a straight angle.



9. If $m\angle EOD = 40^\circ$, find the measure of the angles below.

$$m\angle EOA = \underline{\hspace{2cm}}$$

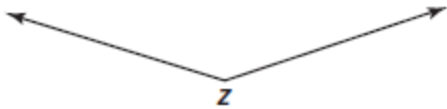
$$m\angle AOB = \underline{\hspace{2cm}}$$

$$m\angle BOC = \underline{\hspace{2cm}}$$

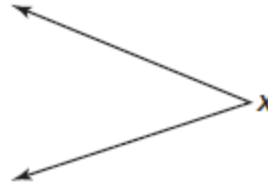
$$m\angle DOC = \underline{\hspace{2cm}}$$

Decide whether each angle below is acute, right, obtuse, or a straight angle.

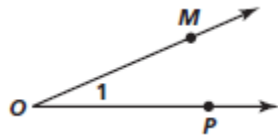
10.



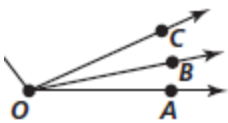
11.



12. Name the angle below in 2 different ways.



Use the diagram below for 13 and 14.



13. If $m\angle COA = 58^\circ$ and $m\angle BOA = 24^\circ$, find $m\angle AOB$.

$$m\angle AOB = \underline{\hspace{2cm}}$$

14. If $m\angle AOB = x + 3$, $m\angle AOC = 2x + 11$, and $m\angle BOC = 4x - 7$, find the value of x.

$$x = \underline{\hspace{2cm}}$$

15. $\angle 1$ and $\angle 2$ form a straight angle. If $m\angle 1 = 2x - 3$ and $m\angle 2 = 3x - 7$, find x.