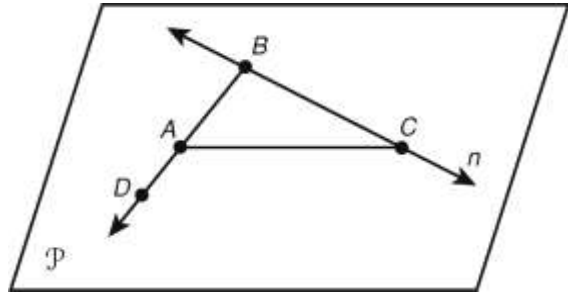# Basics of Geometry III

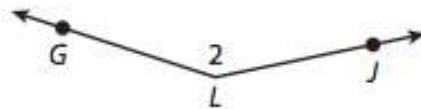**Use the picture for 1-4.**

1.   Name a line. _____

2.   Name a segment on line *n*. _____

3.   Name a ray with endpoint *A*. _____

4.   Name the plane. _____
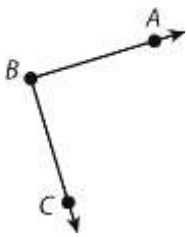
Sketch each figure for 5-6.

5. two rays that form a straight line and that intersect at point P.

6. two line segments that both have a midpoint at point M.

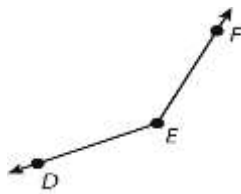7. Name the angle in as many ways as possible.

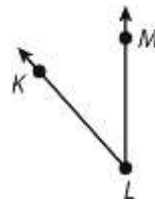**Determine the measure of each angle. Then describe each angle as acute, right, obtuse, or straight.**

8.   9.   10.

m∠*ABC* = _____

m∠*DEF* = _____   m∠*KLM* = _____

_____   _____   _____

_____

11. S is the midpoint of $\overline{RT}$, $RS = 2x + 4$, and $RT = 8x$. Find ST.

12. R, S, and T are collinear, and S is between R and T. If $RS = x + 1$, $ST = 2x - 2$, and $RT = 5x - 5$, find RT.

13. $\overrightarrow{XZ}$ bisects $\angle WXY$, and $m\angle WXZ = 90°$. Find $m\angle WXY$.

14. $m\angle PQR$ if $\overrightarrow{QT}$ bisects $\angle PQR$, $m\angle RQT = (10x - 13)°$, and $m\angle PQT = (6x + 1)°$.

15.

Determine whether each of the following pairs of angles have equal measures.
Select the correct answer for each lettered part.

A. $\angle KJL$ and $\angle LJM$ ○ Yes   ○ No

B. $\angle MJP$ and $\angle PJR$ ○ Yes   ○ No

C. $\angle LJP$ and $\angle NJR$ ○ Yes   ○ No

D. $\angle MJK$ and $\angle PJR$ ○ Yes   ○ No

E. $\angle KJR$ and $\angle MJP$ ○ Yes   ○ No