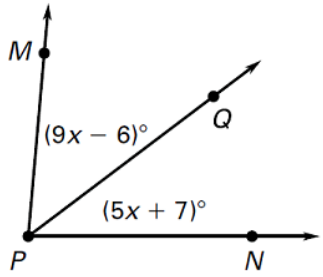
Geometry Study Guide Ch. 1

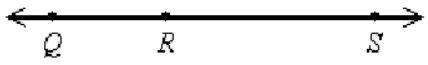
1. Given the points $M(2, -9)$ and $N(1, 3)$, what is the midpoint of $\overline{MN}$?

2. Given the points $P(7, -3)$ and $Q(5, 8)$, what is the approximate length of $\overline{PQ}$?

3. If $m\angle MPN = 80°$, what is $m\angle MPQ$?



4. If $RS = 44$ and $QS = 68$, find QR.

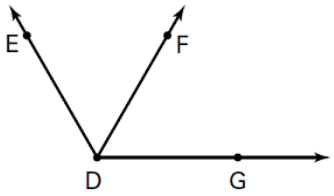


5. If $\angle 1$ and $\angle 2$ are complementary and $m\angle 1 = 47°$, what is $\angle 2$?

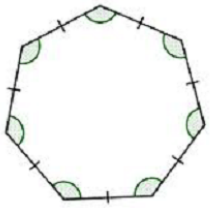
6. If $\angle 1$ and $\angle 2$ are supplementary, what are the measures of the angles when $m\angle 1 = (5x - 10)°$ and $m\angle 2 = (3x + 14)°$?

.

7. Which is a correct name for the angles in the diagram? Describe them.

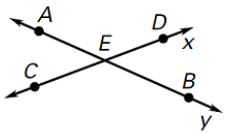


8. What is the correct classification of the figure?

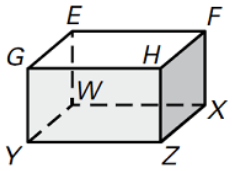


9. The lengths of two sides of a regular octagon are represented by the expressions $x^2 - 2x + 8$ and $x^2 + 4x - 22$. What is the value of x?

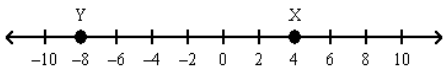
10. Based on the figure, be able to name opposite rays, points that are collinear, intersection points, segments, rays and lines.



11. What is the intersection of plane *HGE* and plane *FEW*?

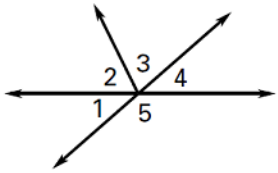


12. What is the length of $\overline{XY}$?



13. $m\angle A$ is 48° greater than $m\angle B$. If $\angle A$ and $\angle B$ are supplementary, find $m\angle A$ and $m\angle B$.

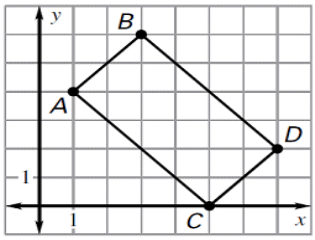
14. Name a linear pair and a pair of vertical angles in the figure shown.



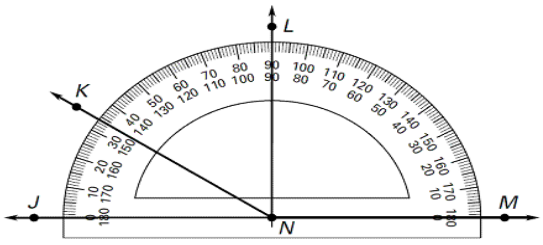
15. Which of the following is a concave polygon?

16. Point M is the midpoint of $\overline{AB}$. If $AM = 10x + 4$ and $MB = 6x + 20$, find the length of $\overline{AB}$.

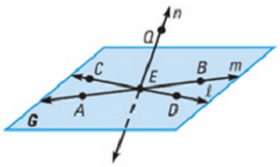
17. Find the length of side AC of $ABCD$ to the nearest hundredth.



18. Use the diagram to find the measure of $\angle JNK$. Then classify the angle.



19. a. Point A lies on line m.
b. Point D lies on line n.
c. Name four points that are coplanar.
d. Name 3 points that are collinear.



20. Be able to classify polygons by the number of sides **and** is it convex or concave.