PAP Geometry Review **Name_____Per_____**
Algebra and 1.1 through 1.5

1. Determine the distance between the points (5, 12) and (-1, 6).

2. Mari draws line segment AB on a coordinate plane. The coordinates of *A* are (1, 5). The coordinates of *B* are (-3, 2). She translates the segment 5 units to the left.

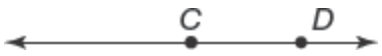
   a. What should she name the new segment?

   b. What are the coordinates of the new coordinates? Use proper notation.

   c. Describe how a horizontal translation changes the coordinates of the endpoints.

   d. How does the length of the image compare with the length of the pre-image? Explain your reasoning.

3. Use construction tools to copy line segment *CD*.



4. Calculate the midpoint of a line segment with the endpoints (-2, -1) and (6, 3).

5. Frank bisected line segment *GH*. He labeled the midpoint *I*. Compare m$\overline{GI}$ and m$\overline{IH}$. Explain your reasoning.

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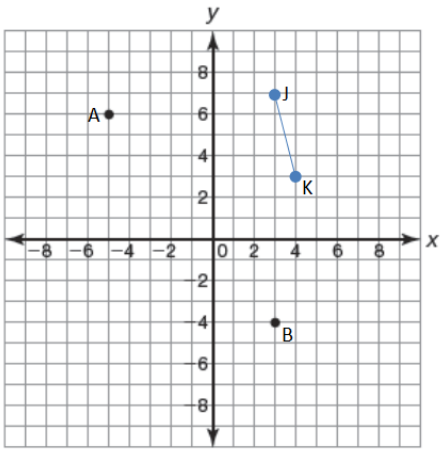
6. Construct a line segment twice the length of $\overline{MN}$.

7. Use the graph to the right for the following.
   a. Calculate the distance between A and B on the coordinate plane below. Leave in simplified radical form.



   b. Translate $\overline{JK}$ 12 units down and 7 units to the left. Be sure to properly label the image.

8. Constuct the midpoint of MH below and label midpoint A. Next, construct the midpoint of AH. Label this midpoint T.

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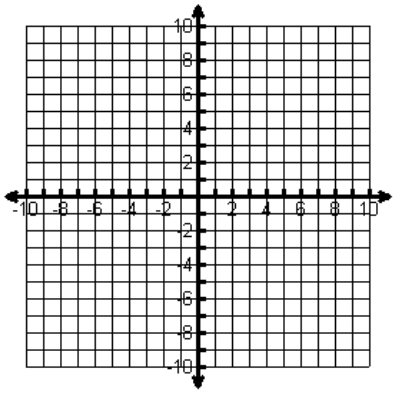
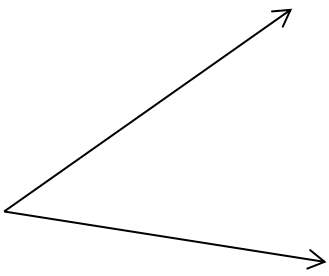
9. Given the endpoints M(-2, 2) and N(6, 8), find the coordinate that is $\frac{3}{4}$ the distance from M to N.

12. What is the distance between the line y = 3x + 1 and the point (-4, 5)



13. Copy the angle and construct the angle bisector on the original angle.



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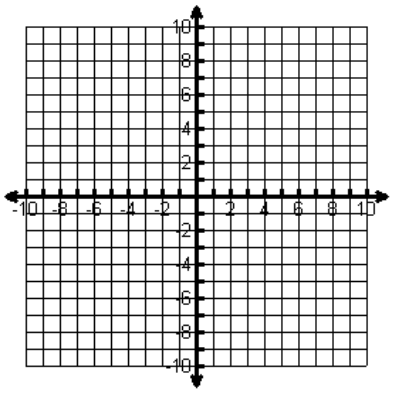
14. Austin (10, -7) and Dallas (0, 8) are plotted on a coordinate grid. Podunk is $\frac{1}{4}$ the distance from Austin to Dallas. What is the coordinate location of Podunk P(,)?



15. a) Find the slope of a line that passes through A (-1,7) and B (5, -10)

b) Determine if $\overleftrightarrow{AB}$ is parallel, perpendicular or neither to $\overleftrightarrow{CD}$ if it passes through C(2, 9) & D(6, -12).

16. Determine the other endpoint if A is (-3, 5) and the midpoint is (4, 9).