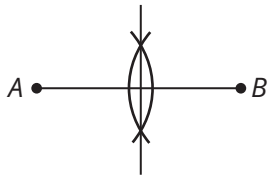
Enhanced End of Topic Assessment

Name _____ Date _____

Part A: Multiple-Choice Questions

1. What is the first step in constructing the perpendicular bisector of $\overline{AB}$?



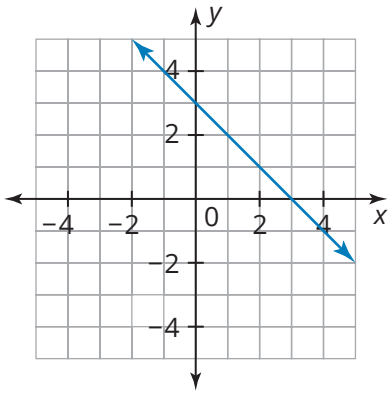
a. Place the point of the compass at point *B*, and draw an arc between points *A* and *B*.

b. Place the point of the compass at point *A*, and draw an arc between points *A* and *B*.

c. Place the point of the compass at point *B*, and open the compass so that it is greater than half of the distance from point *B* to point *A*.

d. Use your straightedge to draw a line through the intersections of the arcs.

2. Consider the graphed equation shown. What is the equation of the line that passes through (–3, 2) and is parallel to the graphed equation?



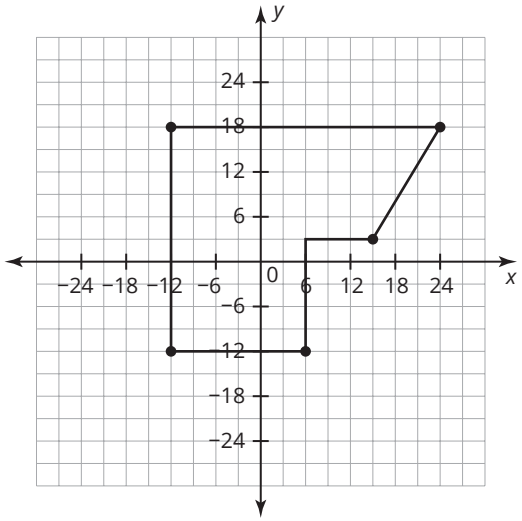
a. $y = x - 1$

b. $y = -x - 1$

c. $y = -x + 4$

d. $y = -x + 2$

3. What is the area of the composite figure?



a. 125 square units

b. 742.5 square units

c. 810 square units

d. 1080 square units

4. Which equation is perpendicular to the line $y = 3$ and passes through the point $(-1, 3)$.

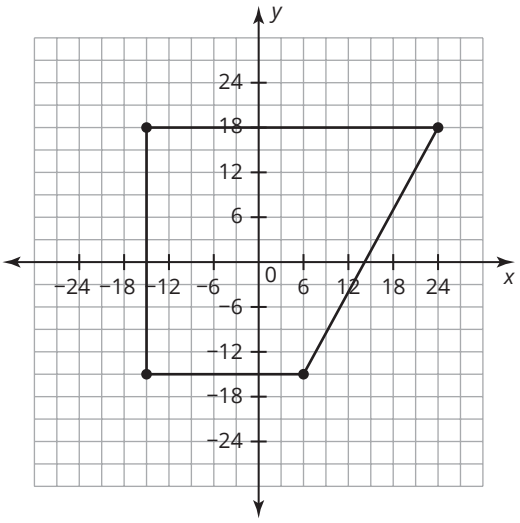
a. $x = 3$

b. $y = 3$

c. $y = -1$

d. $x = -1$

5. Which value is closest to the perimeter of the figure shown on the graph?



a. 110 units

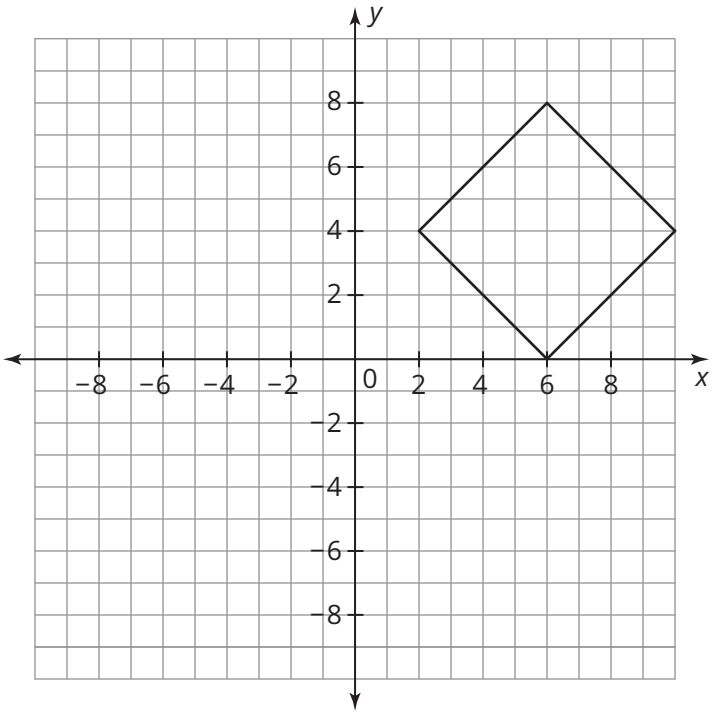
b. 130.6 units

c. 126 units

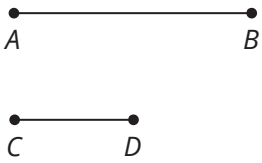
d. 64.6 units

Part B: Open-Response Questions

6. The figure shown was constructed using rigid motions, starting with line segments constructed in one or more squares. Describe a sequence of transformations of a figure that could produce the resulting shape.



7. Use the line segments shown to construct $\overline{EF}$ with a length equal to $AB + 2CD$.



8. Given $\overline{CD}$:

a. Construct the perpendicular bisector of $\overline{CD}$. Label the intersection of $\overline{CD}$ and the perpendicular bisector point E.

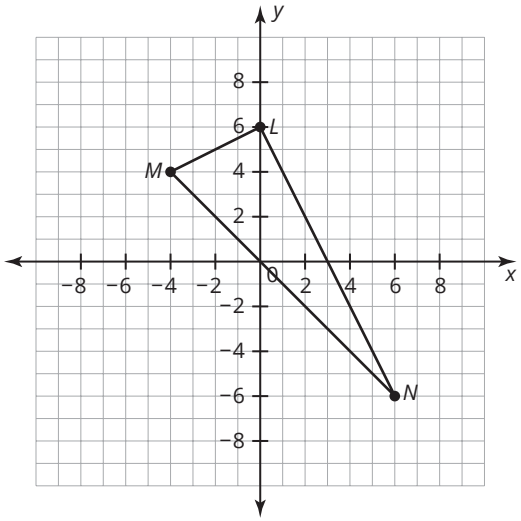
b. Describe the relationship between CE and ED.

9. Write the equation of a line that passes through the point (–6, 9) and is perpendicular to a line that passes through the points (–2, 1) and (6, 7) in point-slope and slope-intercept forms.

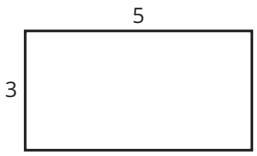
10. Calculate the midpoint of the line segment formed with the endpoints shown. Show your work.

(2, 4) and (5, –1)

11. Classify ΔLMN by sides and angles. Show all of your work and explain your reasoning.



12. Calvin is considering the rectangle shown.

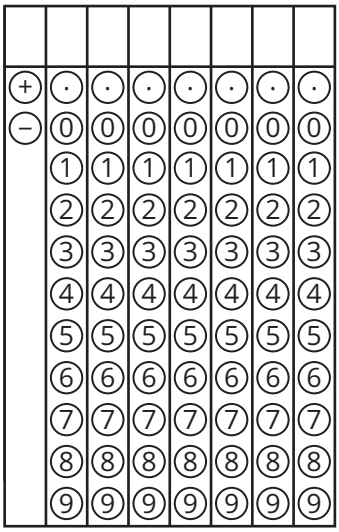


The length of each side is increased by 2 units. Calvin says that would double the perimeter of the rectangle. Is he correct? Explain your reasoning.

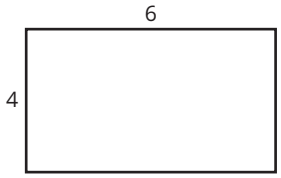
Part C: Griddable Response Questions

Record your answers and fill in the bubbles.

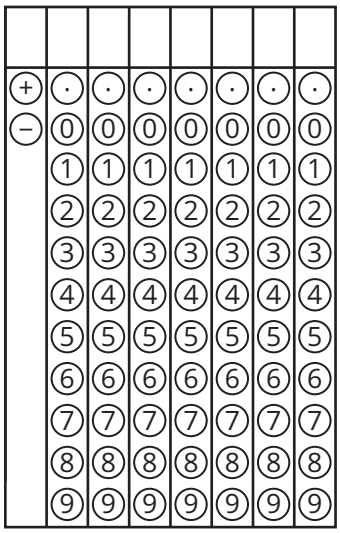
13. Two sides of a triangle measure 18 inches and 24 inches. What is the length of the third side if the side lengths are a Pythagorean triple?



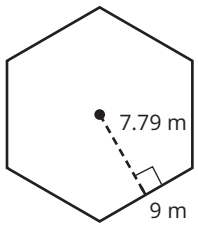
14. A rectangle has the dimensions shown.



The length of each side is quadrupled. How many times larger is the new area when compared to the original?



15. Determine the area of the regular hexagon.



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