Name_____ Date_____

Math 7 Honors Radicals Study Guide

Directions: Show all your work. Check your answers on the class website: www.burmeister.weebly.com

Perfect Squares

1. Simplify $\sqrt{125} + \sqrt{5}$

2. Simplify $\sqrt{72} - 3\sqrt{200}$

3. Simplify $\sqrt{\frac{40}{25}}$

4. Simplify $\sqrt{\frac{300}{36}}$

5. Simplify $\sqrt{\frac{27}{4}} - \sqrt{\frac{12}{64}}$

6. Determine the perimeter of a square with a side length of $7\sqrt{13}$.

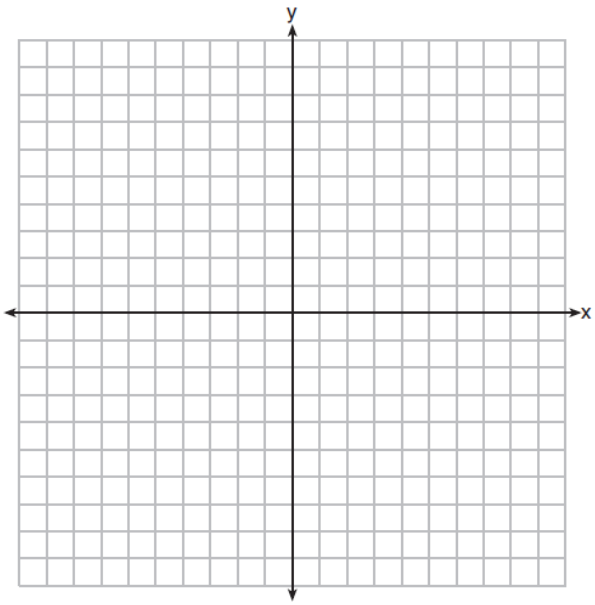
7. Given $X = -5\sqrt{28}$ and $Y = \sqrt{175}$, simplify the following expressions.

$X + Y$ $X - Y$

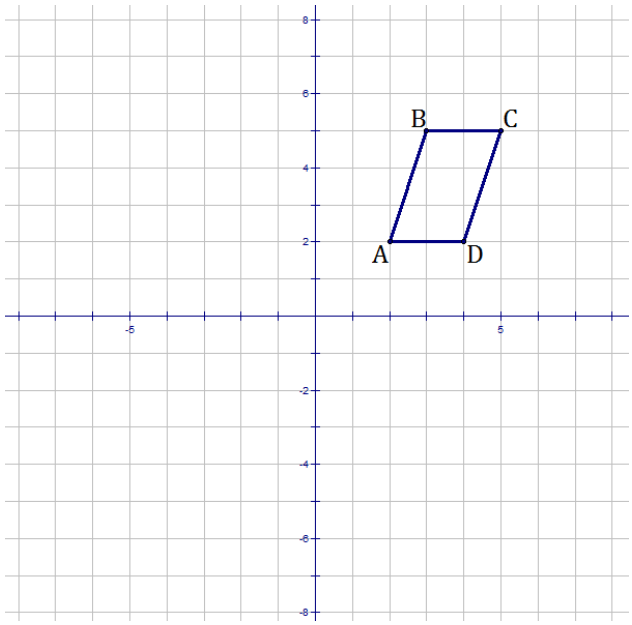
8. Determine the perimeter of a rectangle with a length of $\sqrt{99}$ and a width of $\sqrt{44}$.

9. A rectangle has a base of $\sqrt{7}$ and a height of 9. Determine the diagonal length of the rectangle.

10. Determine the distance between the points $(-7,-1)$ and $(1,-5)$. *Write your answer in simplest radical form.*



11. Parallelogram ABCD is shown below.



Part A Show the image of ABCD after a reflection over the line $y = 1$.

Part B Show the image of A'B'C'D' after the translation $(x, y) \rightarrow (x - 3, y + 1)$.

12. The coordinates of point Q are $(7, 3)$. If the translation $(x, y) \rightarrow (x + 5, y - 8)$ is performed on point Q, what will be the coordinates of Q'?

A $(12, -5)$ **C** $(8, -1)$

B $(12, 5)$ **D** $(8, 1)$

13. Triangle ABC is located in quadrant I. If the triangle is reflected in the $x - axis$, then ΔA'B'C' will be located in which quadrant?

A I **C** III

B II **D** IV