

NAME: _____

SHOW ALL WORK NEATLY TO RECEIVE CREDIT!

1) Give the coordinates of the image point under a reflection across the given line.

a. $(2, -4)$; y-axis

b. $(-5, -8)$; x-axis

c. $(-2, 5)$; $y = x$

d. $(3, -6)$; $y = -x$

a. _____

b. _____

c. _____

d. _____

2) Solve by factoring: $3x^2 - 10x + 8 = 0$

x = _____ or

x = _____

3.) Solve using the Quadratic Formula: $x^2 + 11x = 2$

x = _____ or

x = _____

4.) Solve by taking the square root: $4x^2 + 1 = 25$

x = _____ or

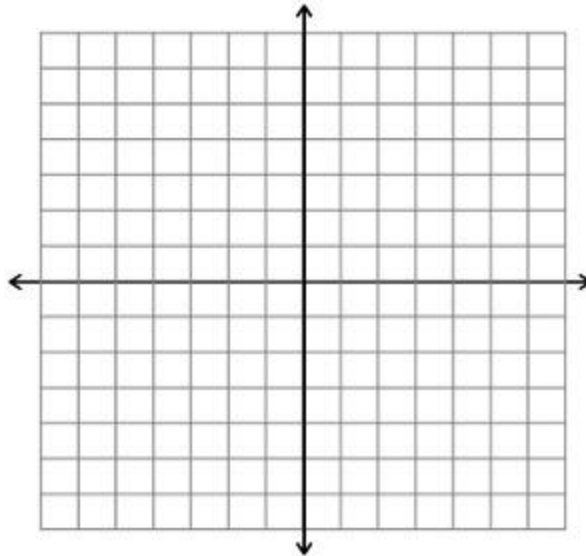
x = _____

5.) If $\triangle UNC \sim \triangle BAD$, $UC = 15$, $BD = 90$, and $NC = 11$, what is the length of side \overline{AD} ? $AD =$ _____

6.) A racecar completes one lap of the race in 25 seconds travelling 180 miles per hour. If the speed of the car and the time it takes to complete a lap are inversely proportional, how long would it take for the car to complete a lap if it was travelling 200 miles per hour?

7.) For the transformed quadratic function $y = -(x - 2)^2 + 3$:

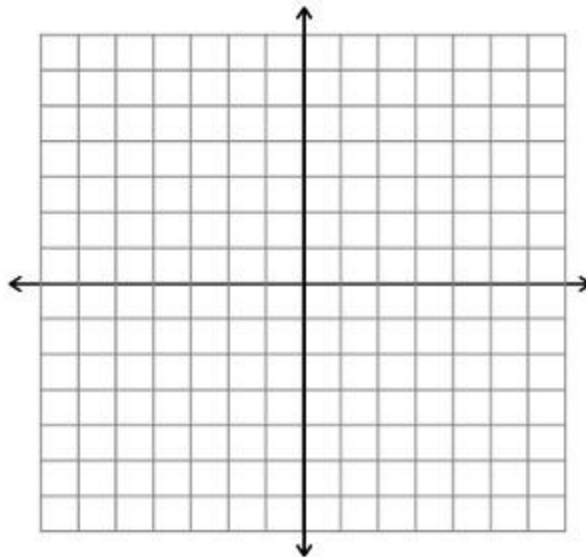
- a.) Give the equation of the parent function.
- b.) List the transformations.
- c.) Show the table of transformed characteristic points.
- d.) Graph the transformed function.



a. _____
 b. _____

8.) For the transformed rational function $y = -\frac{2}{x+5} - 3$:

- a.) Give the equation of the parent function.
- b.) List the transformations.
- c.) Give the equations of the asymptotes.
- d.) Graph the transformed function.



a. _____
 b. _____

 c. HA: _____
 VA: _____

9.) Place the standard form quadratic $y = x^2 - 12x + 7$ in vertex form by completing the square.

y = _____