Algebra 2 Bellwork Tuesday, October 21, 2014

1. Find the y-intercept of this line: $6x - 8y = 96$

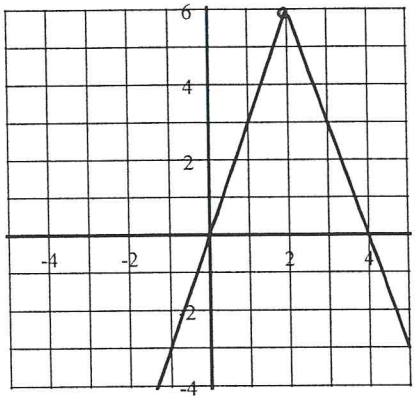
2. Find the y-intecept for each function below.

a) $y = \sqrt{2x + 9} - 7$ b) $f(x) = 5x^3 - 9x^2 + 17x - 3$

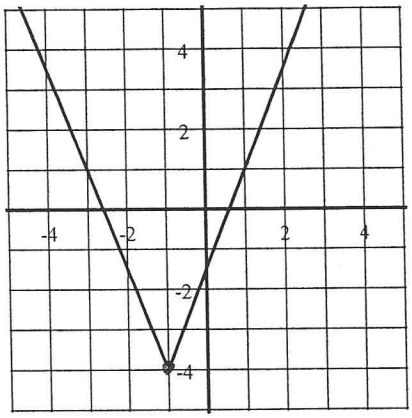
3. Write the equation of each Absolute Value function.

a) Translated 4 units left, 9 units down, and half as tall.

b) Shown below.

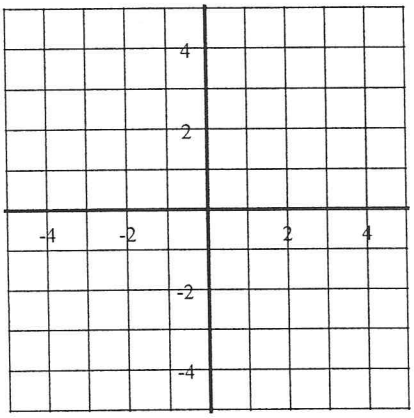


c) Shown below.

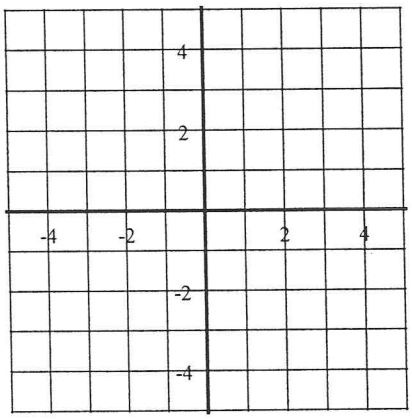


4. Graph each absolute value function using 5 points.

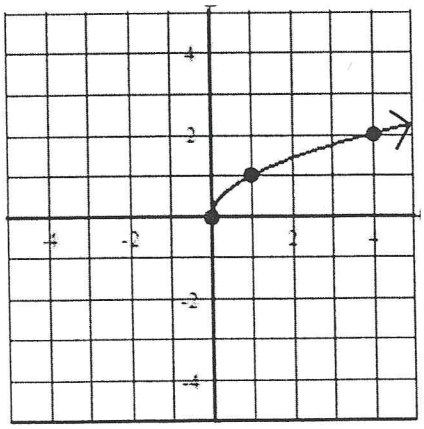
a) $y = -0.5|x + 2| + 3$



b) $y = 2|x - 3| - 1$



5. Use the graph of the parent function $y = \sqrt{x}$ shown below to graph $y = 2\sqrt{x + 3} - 5$



Algebra 2 Bellwork Tuesday, October 21, 2014

Answers

1. Find the y-intercept of this line: $6x - 8y = 96$

y-int = -12 → (0, -12)

2. Find the y-intecept for each function below.

a) $y = \sqrt{2x+9} - 7$

y-int = -4 → (0, -4)

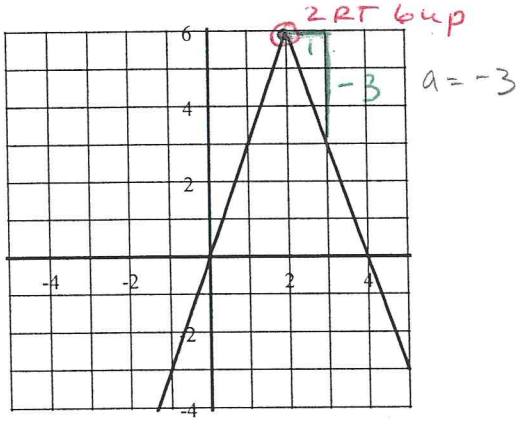
b) $f(x) = 5x^3 - 9x^2 + 17x - 3$

y-int = -3 → (0, -3)

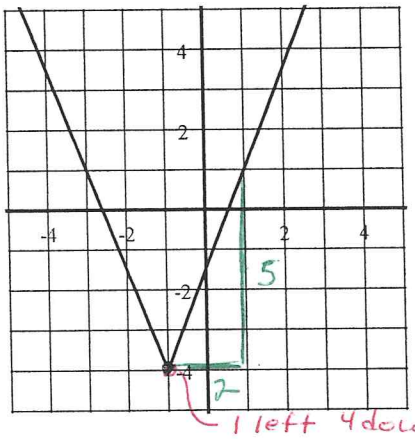
3. Write the equation of each Absolute Value function.

a) Translated 4 units left, 9 units down, and half as tall. $y = \frac{1}{2}|x+4| - 9$

b) Shown below. $y = -3|x-2| + 6$



c) Shown below. $y = \frac{5}{2}|x+1| - 4$

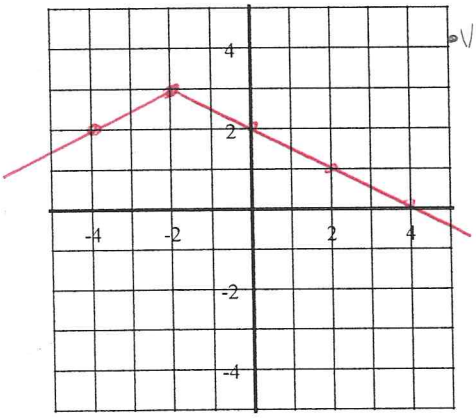


$a = 5/2$

4. Graph each absolute value function using 5 points.

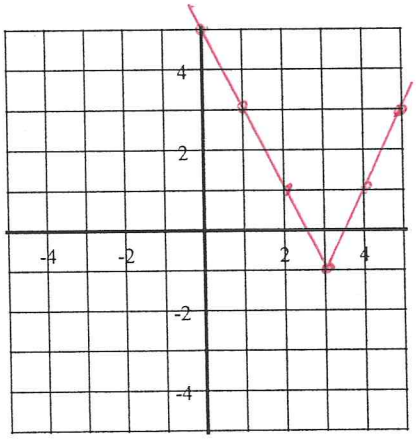
a) $y = -0.5|x+2| + 3$

- 2 left 3 up
- opens down
- V. shrink factor 1/2

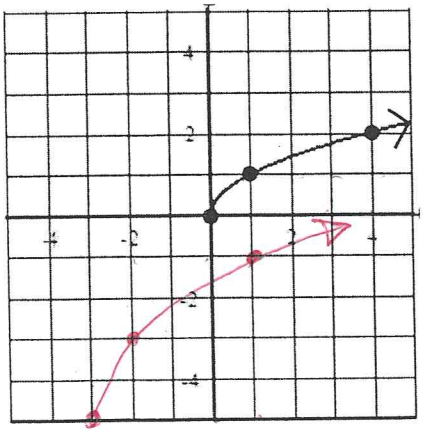


b) $y = 2|x-3| - 1$

- 3 RT 1 down
- V. stretch factor 2



5. Use the graph of the parent function $y = \sqrt{x}$ shown below to graph $y = 2\sqrt{x+3} - 5$



- 3 Left
- 5 down
- V. stretch factor = 2