Bellwork Tuesday, March 11, 2014

1. Write the equation of the line that passes through this pair of points. Give your answer in both Point-Slope and Slope-Intercept Forms.

(5,9) and (-7, -33)

$\frac{-33-9}{-7-5} = \frac{7}{2}$ $y-9=\frac{7}{2}(x-5)$ $y-9=\frac{7}{2}x-17.5$ $+9 \quad +9$ $y=\frac{7}{2}x-8.5$

2. Use this line: $y = 3x - 10$

a) Write the equation of the line that is perpendicular to this line and passes through the point (-6, 1)

$y-1=-\frac{1}{3}(x+6)$ $y-1=(-\frac{1}{3}x+18)$

b) Write the equation of the line that is parallel to this line and passes through the point (9, -5)

$y+5=3(x-9)$ $y=3x+b$ $-5=27+b$ $-27 \quad -32=b$ $y=3x-32$

Find the coordinates of the vertex of each Absolute Value Function and tell if the graph opens up or down.

3. $y = -5|x + 3| - 2$ $y+2$

Vertex: $(-3,-2)$ Which way does graph open? down

4. $y = 1.5|x - 7| + 6$

Vertex: $(7,6)$ Which way does graph open? up

5. Write the equation of the line that passes through each pair of points.

a) (6,-8) and (6,2)

$x=6$

b) (-4, -7) and (3, -7)

$y=-7$ $y+7=0(x+4)$ $y+7=0$ $y=-7$