

rev. direct variation Quiz tomorrow

1) Write direct variation for line through $(2, -8)$. 2) Find vertex for $y = |x + 1| - 4$

2.8b - Absolute Value Inequalities

$$y = a|x-h| + k \text{ becomes}$$

$$\left. \begin{array}{l} y < a|x-h| + k \\ y > a|x-h| + k \\ y \leq a|x-h| + k \\ y \geq a|x-h| + k \end{array} \right\} \begin{array}{l} h \rightarrow \text{horizontal move (opposite)} \\ k \rightarrow \text{vertical move (same)} \end{array}$$

Graph

$$y > -|x-3| + 4$$

1st - Find vertex

$$(3, 4)$$

2nd - Plot using slopes/symmetry

$$m = 1, -1$$

* - means opens downward

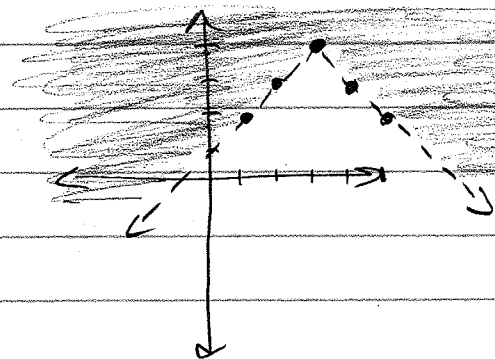
3rd - Dashed line

4th - Test point $(3, 0)$

$$0 > -|3-3| + 4$$

$$0 > -0 + 4$$

$$0 > 4 \text{ - No...}$$



Homework

$$22) y > |x-1|$$

$$24) y \geq |x+4| - 3$$

$$27) y < 2|x-1| - 4$$