

V – Power

Directions:

Positive absolute value functions make very vivacious, vivid, voluminous graphs. They have V – Power!

Absolute values functions make graphs that look like giant V's! We'll see how in this on – site lesson.

In the function $y = |x + 6| + 4$, we know the graph will make a "V," but we don't know where it starts. The vertex, or bottom of the "V" can be found very easily. You start at the origin, move to the left or right by the number of spaces indicated by the number adding (left) or subtracting (right) x. Then you vertically translate by the number outside of the absolute value symbols by going up (positive) or down (negative). In this case, the vertex is (-6,4).

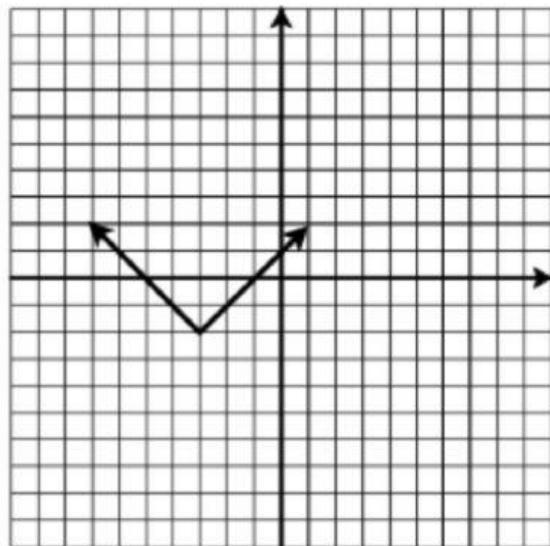
From there you notice the number on the outside of the parenthesis is 1, so we go up one and over one in either direction to make our V. V – Power!

Graph the following absolute value functions:

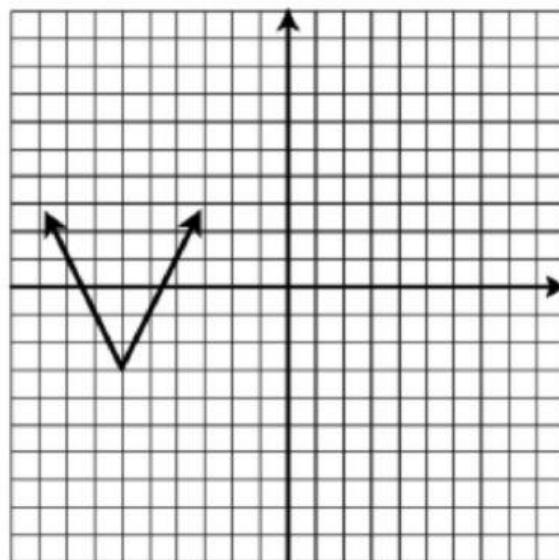
1. $y = |x + 1| - 3$
2. $y = 2|x + 3| + 1$
3. $y = 3|x - 7| - 4$

Determine the equations for the following absolute value functions:

4.) $y =$ _____



5.) $y =$ _____



4.

