

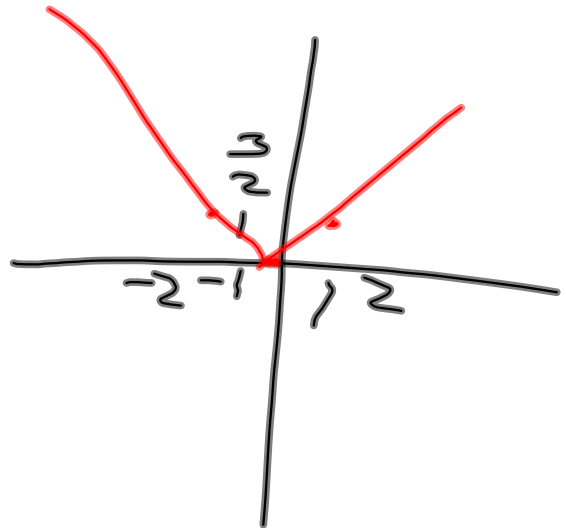
Not in Book | Absolute value equations
Graph $y = |x|$

① Find what makes the
absolute value = zero
This is the vertex.

② Add 1 to the "x" in the
vertex and subtract 1 from
the "x" in the vertex. Use these
other x's to get the other points

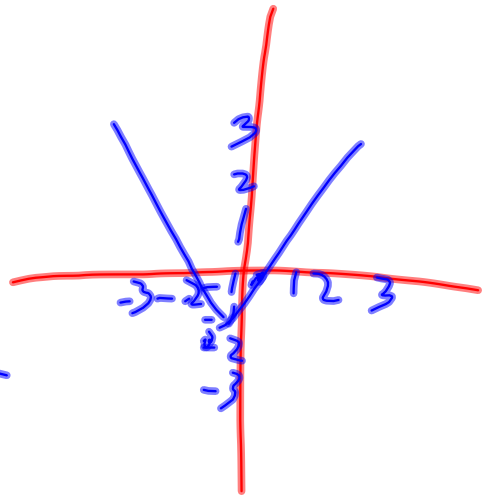
$$y = |x|$$

x	y
0	0
1	1
-1	1



$$y = |x+1| - 2$$

x	calc	y	Point
-1	$ -1+1 - 2$	-2	$(-1, -2)$
0	$ 0+1 - 2$	-1	$(0, -1)$
-2	$ -2+1 - 2$ $ -1 - 2 = -1 - 2$	-1	$(-2, -1)$



$$y = -|x+1| - 2$$

x	y
-1	-2
0	-3
-2	-3

$$= -2$$

$$y = -|0+1| - 2$$

$$= -|1| - 2$$

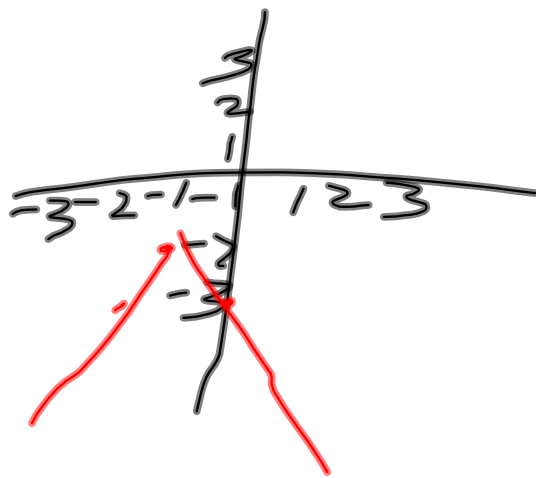
$$= -1 - 2 = -3$$

$$= -|-2+1| - 2$$

$$= -|-1| - 2$$

$$= -1 - 2$$

$$= -3$$



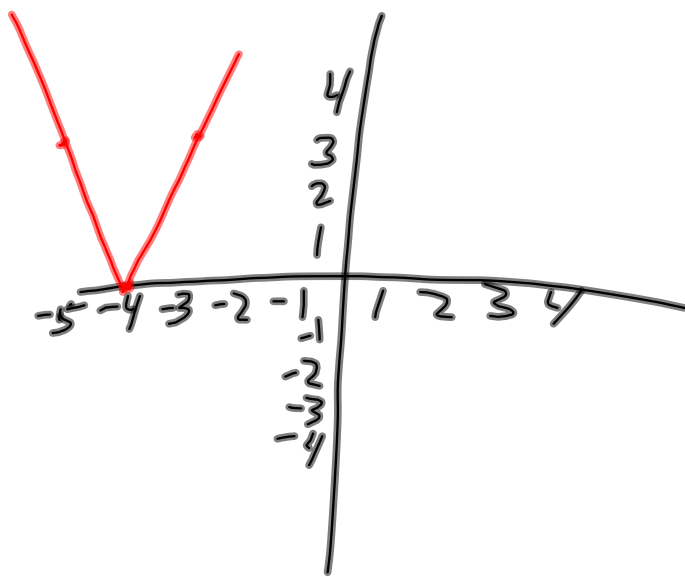
$$y = |3x + 12|$$

$$y = |3(-4) + 12|$$
$$= |-12 + 12| = 0$$

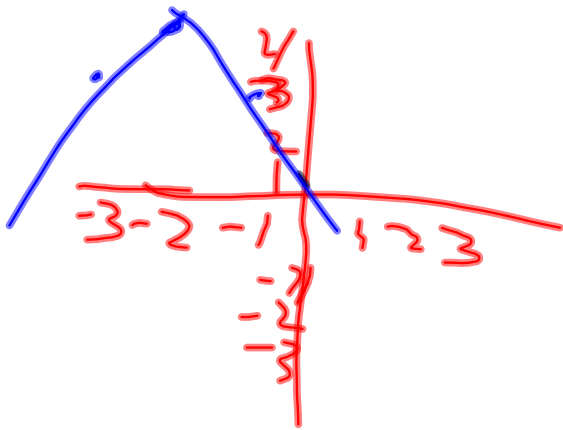
x	y
-4	0
-3	3
-5	3

$$y = |3(-3) + 12|$$
$$= |-9 + 12|$$
$$= |3| = 3$$

$$y = |3(-5) + 12|$$
$$= |-15 + 12|$$
$$= |-3| = 3$$



$$y = 4 - |x + 2|$$

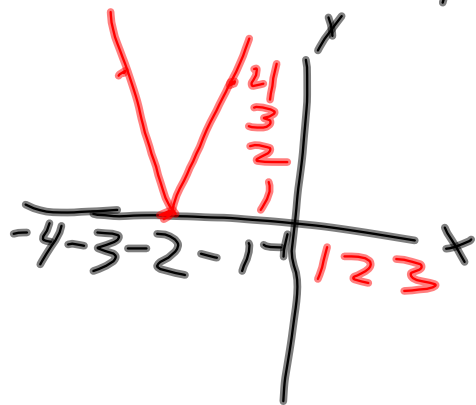


x	y
-2	4 vertex
-1	3
-3	3

minimum - vertex is lowest
point on the graph
Graph goes up

maximum - vertex is the
greatest point on the graph
graph goes down

$$y = 4|x+2|$$



x	y
-2	0 vertex
-1	4
-3	4

$$y = |x+2| - 4$$

x	y
-2	-4
-1	-3
-3	-3

