

4.3A Worksheets

Kuta Software - Infinite Algebra 2

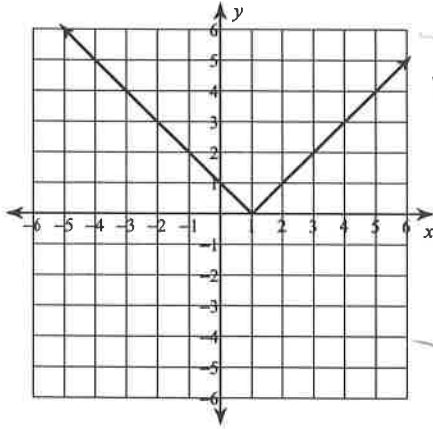
Name KEY

Graphing Absolute Value Equations

Date _____ Period _____

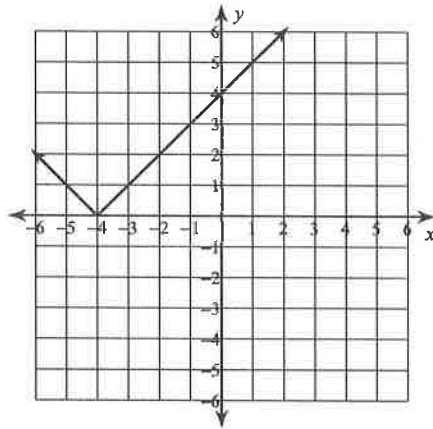
Graph each equation. #1-6 like 4.3B

1) $y = |x - 1| + 0$

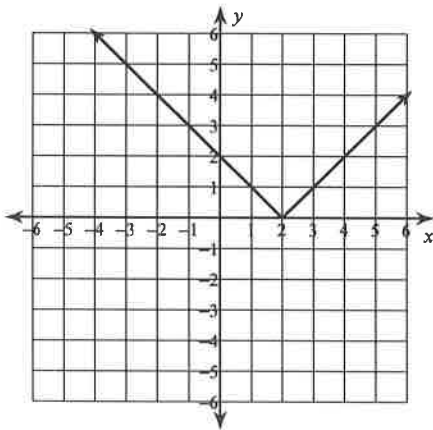


vertex (1, 0)
regular count
over 1, up 1
over 2, up 2
over 3, up 3

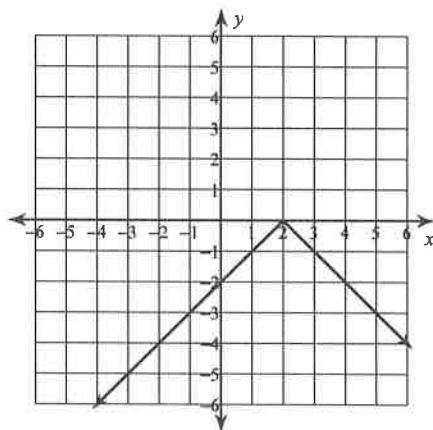
2) $y = |x + 4| + 0$



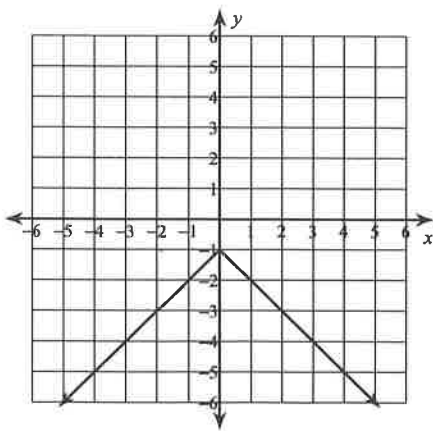
3) $y = |x - 2| + 0$



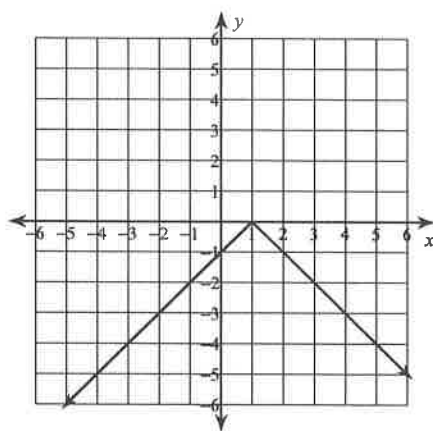
4) $y = -|x - 2| + 0$



5) $y = -|x| - 1$

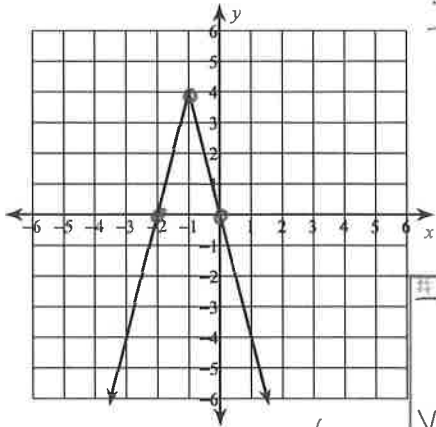


6) $y = -|x - 1| + 0$



turn over
↪

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



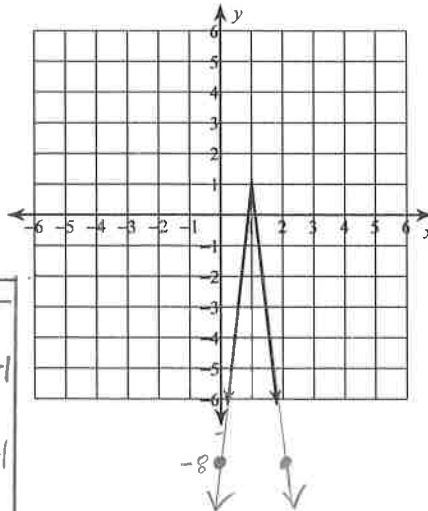
x	y
-2	0
0	0

pick closest x's on either side of vertex...

#7 as a piecewise:

$$y = \begin{cases} -4x & \text{when } x \geq -1 \\ 4x + 8 & \text{when } x < -1 \end{cases}$$

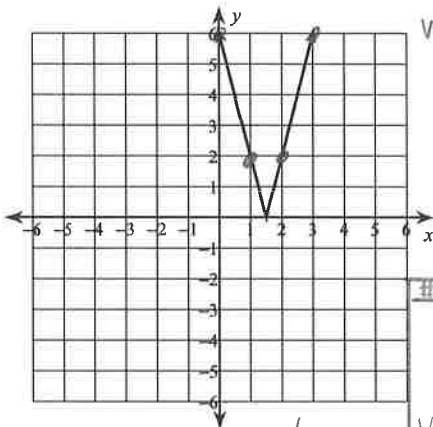
8) $y = -3|3x-3| + 1$



vertex (1, 1)

x	y
0	-8
2	-8

9) $y = 2|2x-3| + 0$



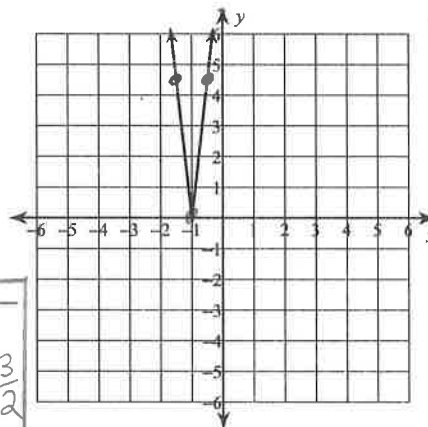
vertex $(\frac{3}{2}, 0)$
or $(1.5, 0)$

x	y
1	2
2	2
0	6
3	6

#9 as a piecewise:

$$y = \begin{cases} 4x - 6 & \text{when } x \geq \frac{3}{2} \\ -4x + 6 & \text{when } x < \frac{3}{2} \end{cases}$$

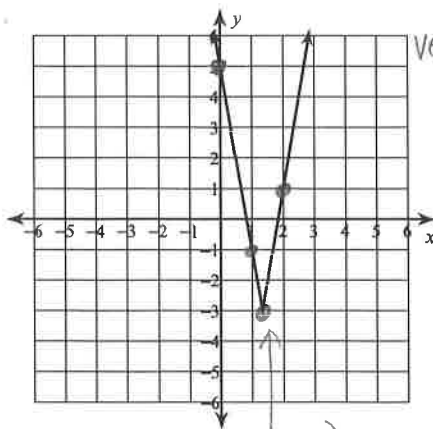
10) $y = 3|-3x-3| + 0$



vertex $(-\frac{3}{3}, 0)$
= $(-1, 0)$

x	y
-2	9
0	9
-1.5	4.5
-0.5	4.5

11) $y = 2|-3x+4| - 3$

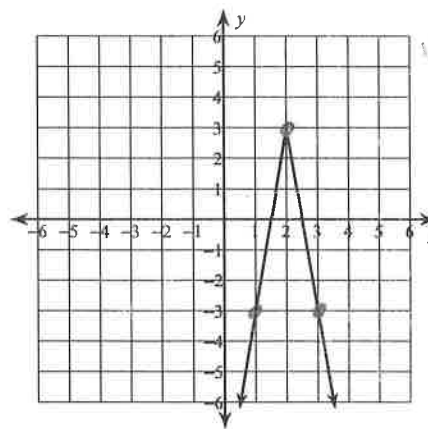


vertex $(-\frac{4}{-3}, -3)$
= $(\frac{4}{3}, -3)$

x	y
1	-1
2	1
0	5

vertex = $(\frac{4}{3}, -3)$

12) $y = -3|-2x+4| + 3$



vertex (2, 3)

x	y
1	-3
3	-3

right over left, switch middle sign $(-\frac{4}{-2})$