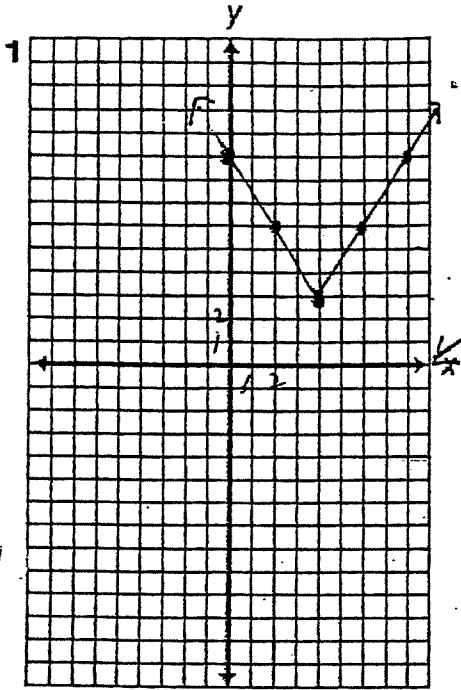
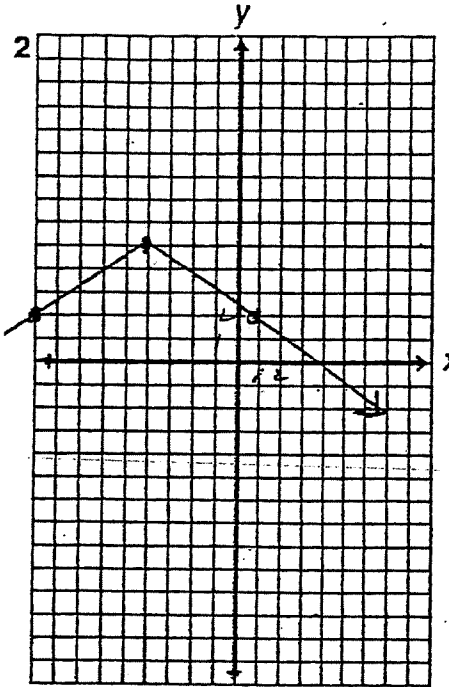


$(3, 9)$   
 $9 = \frac{5}{6}(3) + b$   
 $\frac{15}{2} - \frac{5}{2} = b$   
 $b = \frac{13}{2}$

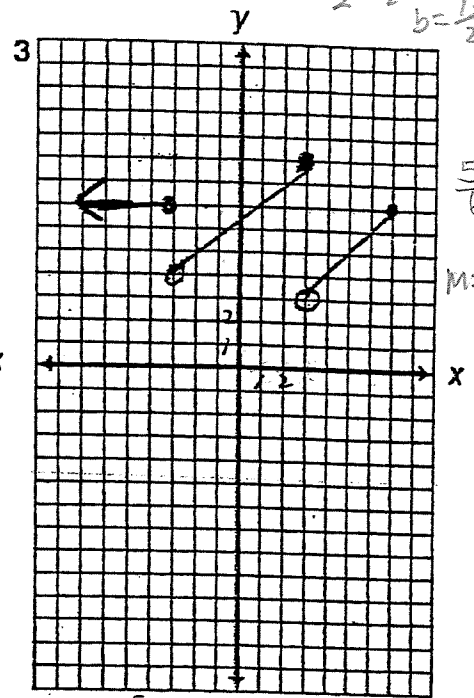
Write the equation of each graph.



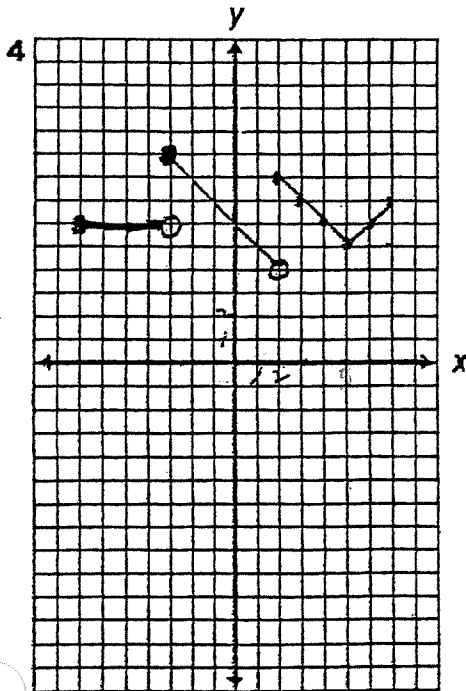
$y = \frac{3}{2}|x - 4| + 3$



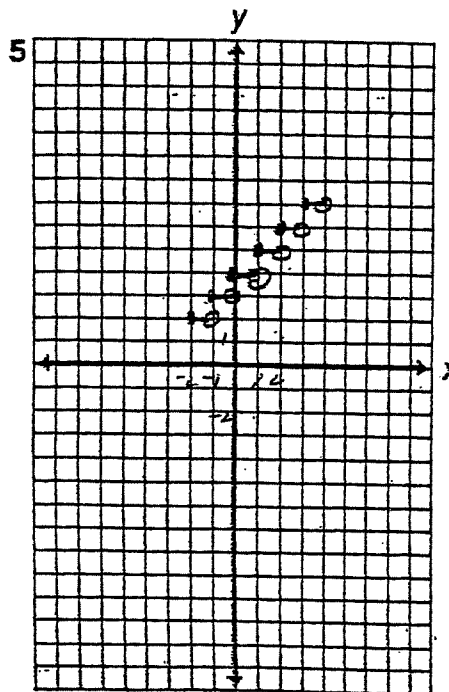
$y = -\frac{3}{5}|x + 4| + 5$



$f(x) = \begin{cases} 7, & x \leq -3 \\ \frac{5}{6}x + \frac{13}{2}, & -3 < x \leq 3 \\ x, & 3 < x \leq 7 \end{cases}$



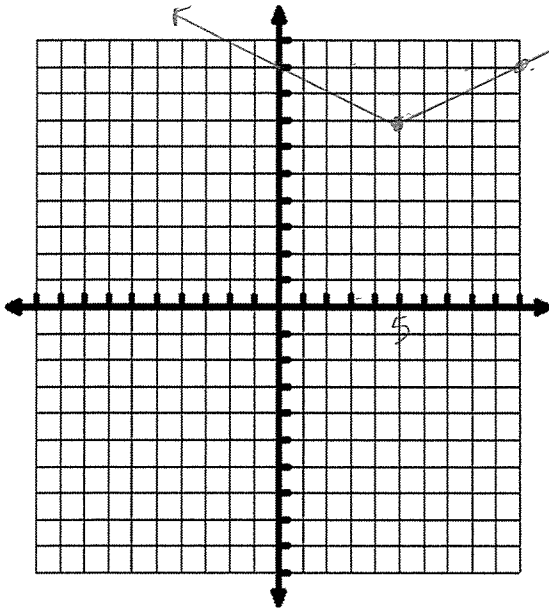
$f(x) = \begin{cases} 6, & -7 \leq x < -3 \\ -x + 6, & -3 \leq x < 2 \\ |x - 5| + 5, & 2 \leq x \leq 7 \end{cases}$



$f(x) = [x] + 4$

Graph each absolute value function.

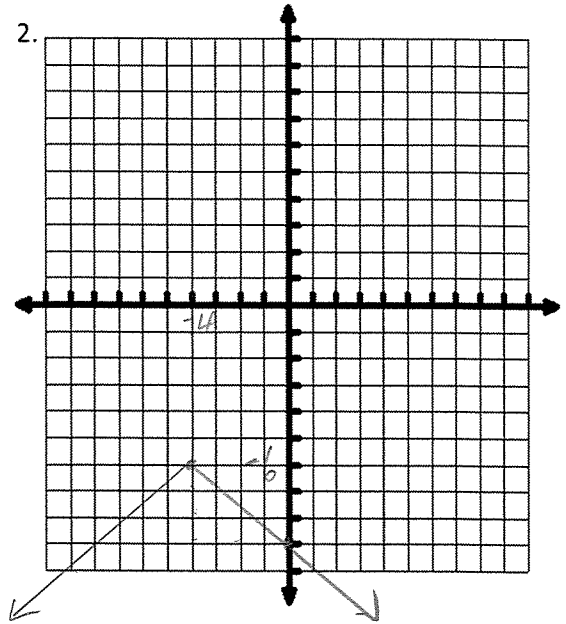
1.



$$y = \frac{2}{5}|x-5| + 7$$

vertex  $(5, 7)$   
slope  $= \frac{2}{5}$

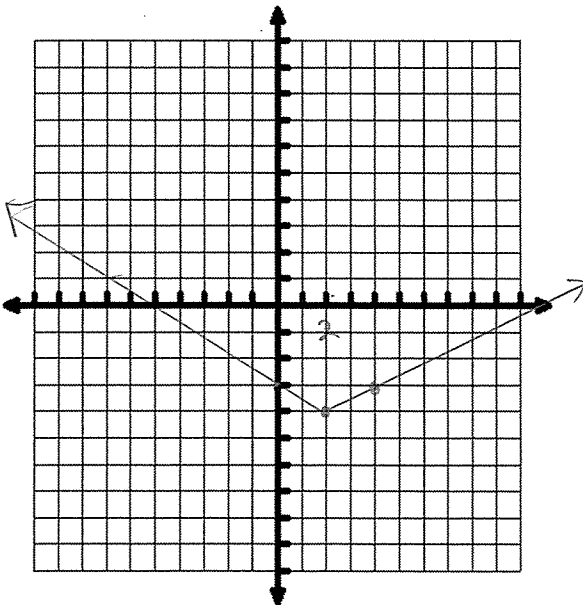
2.



$$y = -\frac{3}{4}|x+4| - 6$$

$V(-4, -6)$

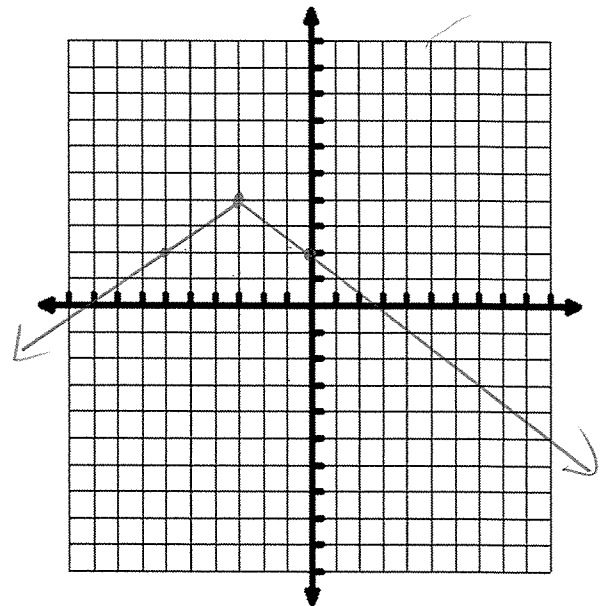
3.



$$y = \frac{1}{2}|x-2| - 4$$

$V(2, -4)$

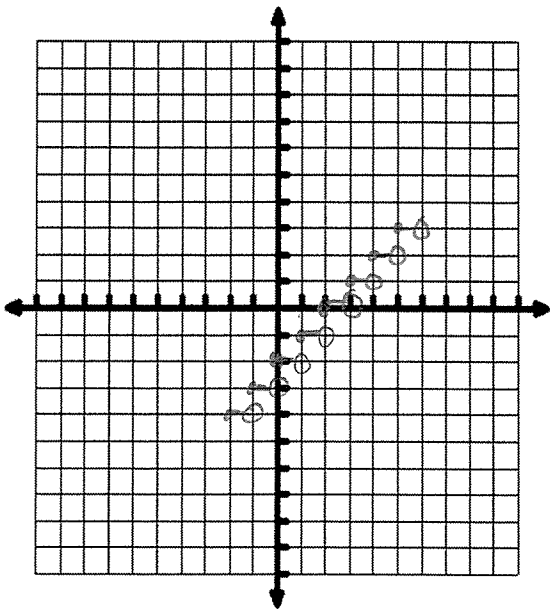
4.



$$y = -\frac{2}{3}|x+3| + 4$$

$V(-3, 4)$

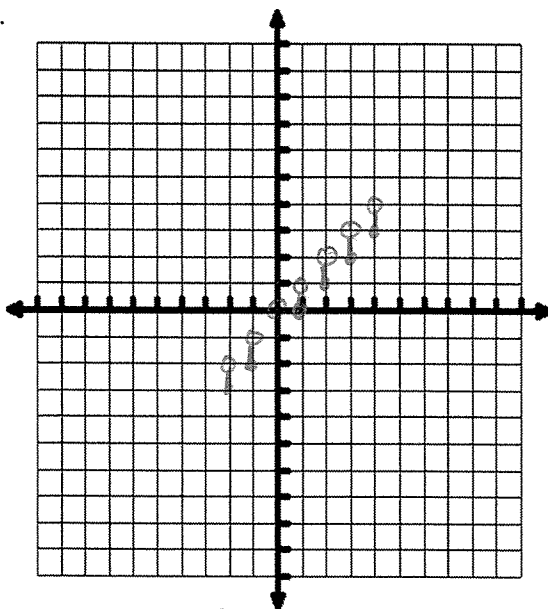
5.



x	y
0	-2
1	-1
2	0

$y = [x-2]$  horizontal shift Rt. 2x

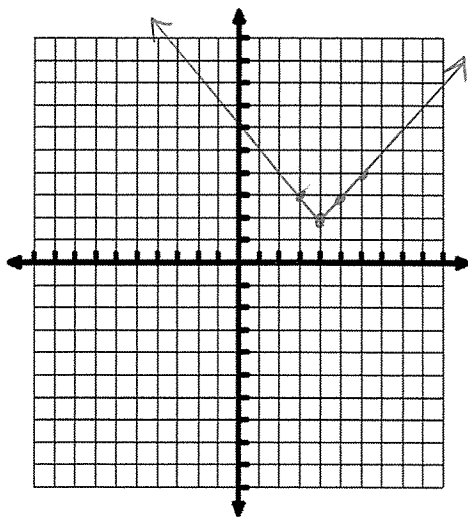
6.



$x = [y+1]$

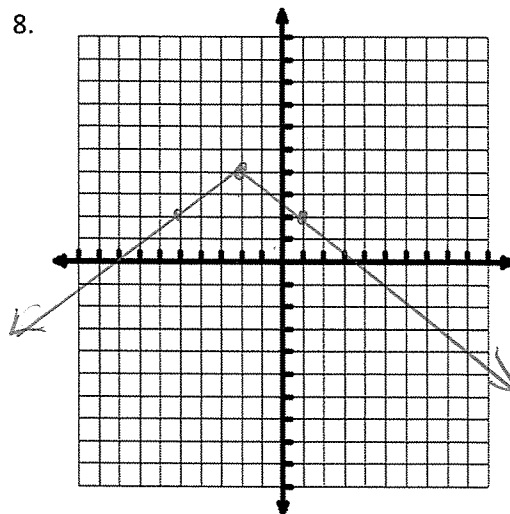
Is this a function? NO

7.



$y = |x-4| + 2$   
V(4, 2)

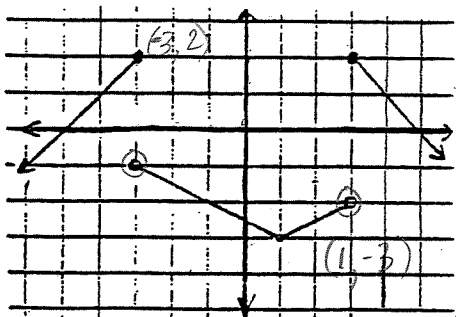
8.



$3y-12 = -2|x+2|$   
 $3y = -2|x+2| + 12$   
 $y = -\frac{2}{3}|x+2| + 4$   
V(-2, 4)

9. Write the equation of the piecewise function.

(3, 2)  
 $2 = (1)(3) + b$   
 $5 = b$   
 $y = x + 5$



(3, 2)  
 $2 = (-1)(3) + b$   
 $5 = b$   
 $-x + 5$

$f(x) = \begin{cases} x+5, & x \leq -3 \\ \frac{1}{2}|x+1|-3, & -3 < x < 3 \\ -x+5, & x \geq 3 \end{cases}$

10. In the general form  $y = a|x-h| + k$ , how does each value affect the graph of an absolute value function?

a: tells you slope, when it's a vertical stretch or shrink  
h: shifts left or right  
k: shifts up or down

(h, k) = vertex