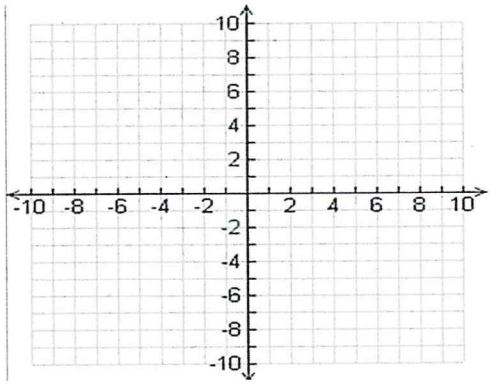
Graphing Piecewise, Step and Absolute Value Functions

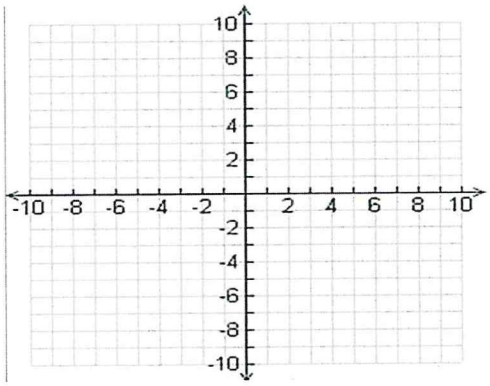
Name_____

Graph the value of the function. **(4 points each)**

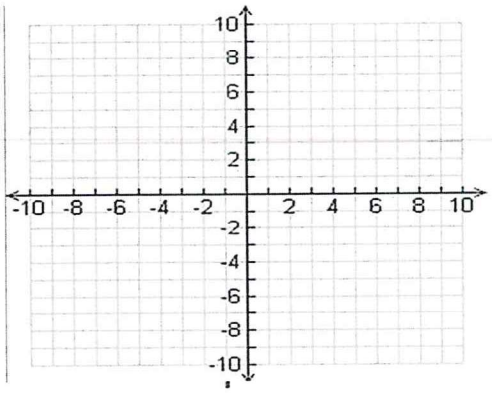
1. $f(x)=\begin{cases}-x+2, & x\le 0\\ 2x-1, & x>0\end{cases}$



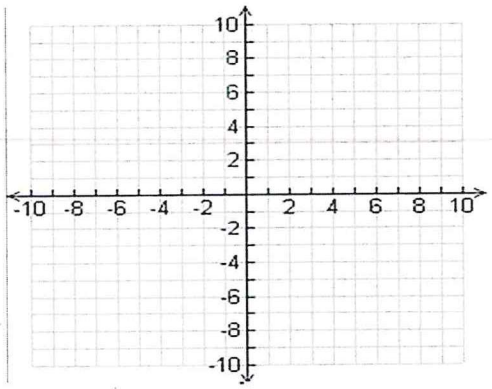
2. $g(x)=\begin{cases}1, & x<-3\\ -2, & -3\le x<2\\ 4, & x\ge 2\end{cases}$



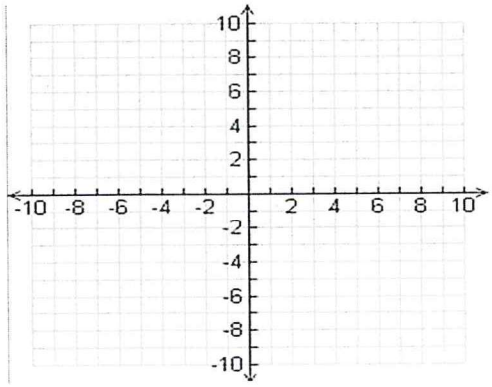
3. $f(x)=\begin{cases}2x+3, & x<-2\\ 3x+1, & x\ge -2\end{cases}$



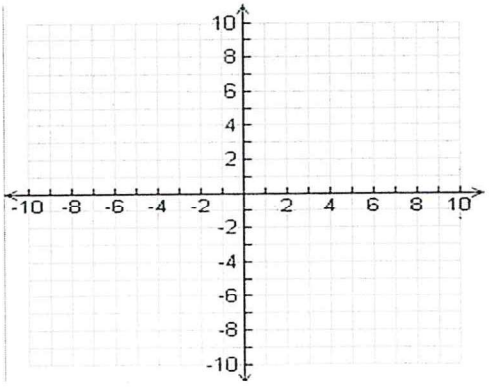
4. $f(x)=\begin{cases}1, & -3\le x<1\\ 2, & 1\le x<3\\ 4, & 3\le x<5\\ 5, & 5\le x<9\end{cases}$



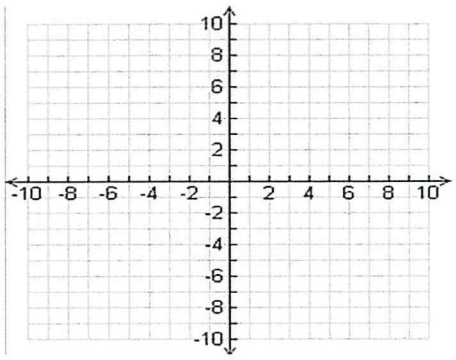
5. $y=|x+2|-4$



6. $y=-\frac{1}{2}|x-5|+3$



7. $f(x) = -3|x| + 5$



8. Given $h(x) = -8 | x + 1 | - 3$

a.)Tell me if it opens up or down?

b.)Is it narrower or wider than $y = |x|$?

c.) What is the vertex?

9. Describe the difference between a piecewise function and a step function.

Solve each equation.

10) $|6m| = 42$

12) $|-6x| = -30$

13) $|k - 10| = 3$

14) $|n| + 1 = 2$

15) $-3|p| = -12$

16) $||m| + 2 = 11$

17) $7|n| = 56$

18) $\frac{|m|}{-5} = 3$