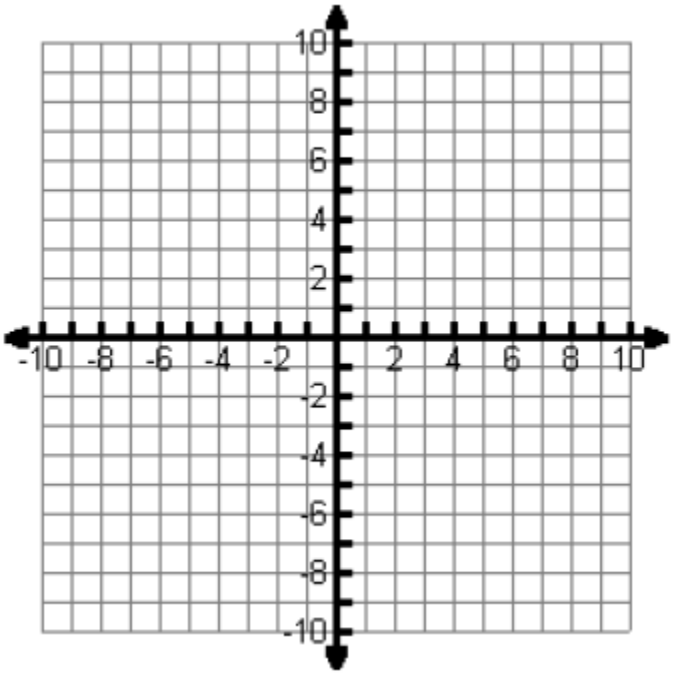
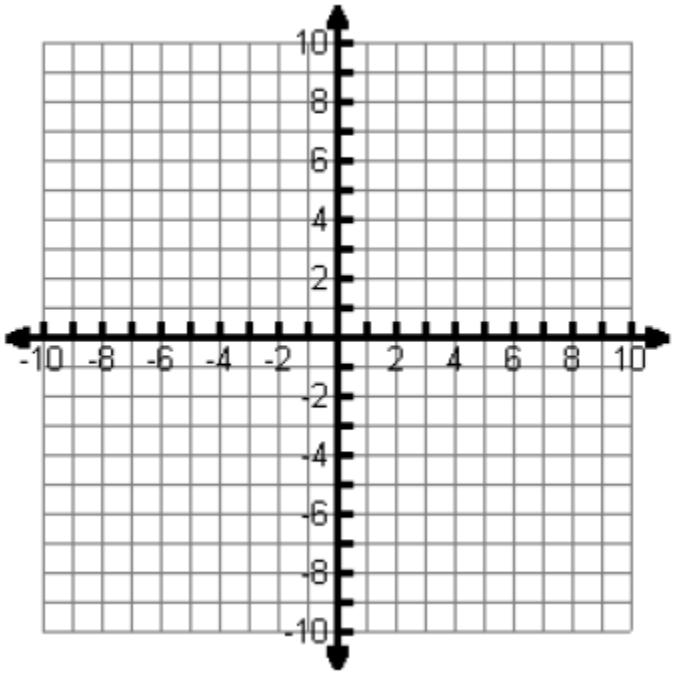
Graphing Piecewise Functions **Name: _____ Period: _____**

Graph each of the following piecewise functions. Identify any points of discontinuity.

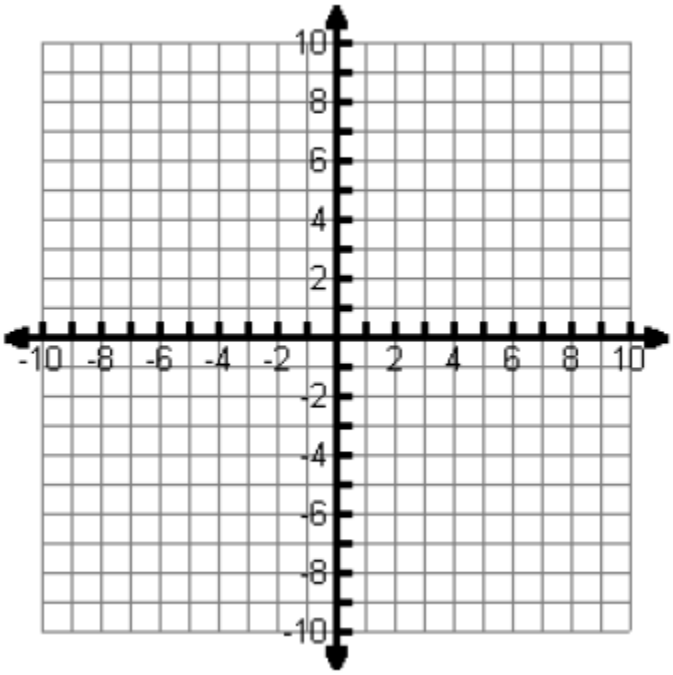
1. $f(x)=\begin{cases} x+5 & \text{if } x<-2 \\ -4 & \text{if } x\geq -2 \end{cases}$



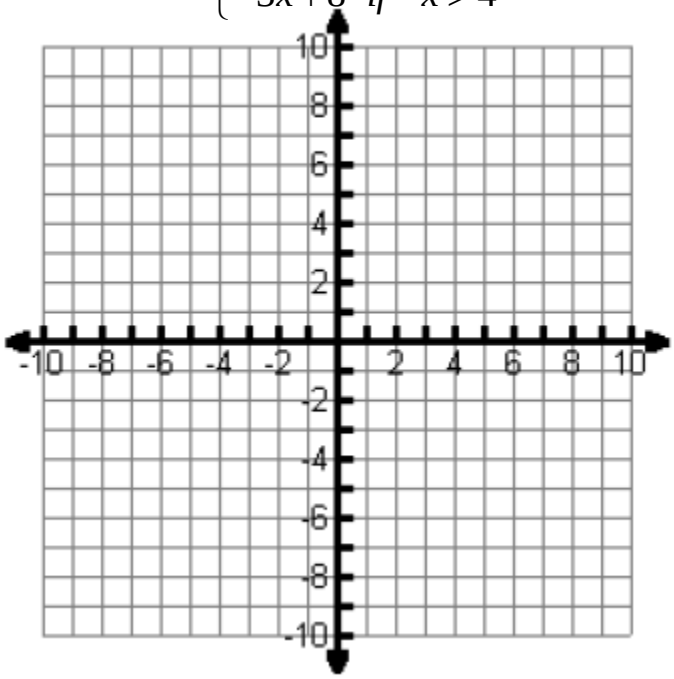
2. $f(x)=\begin{cases} 2x+1 & \text{if } x<1 \\ -2x+3 & \text{if } x>1 \end{cases}$



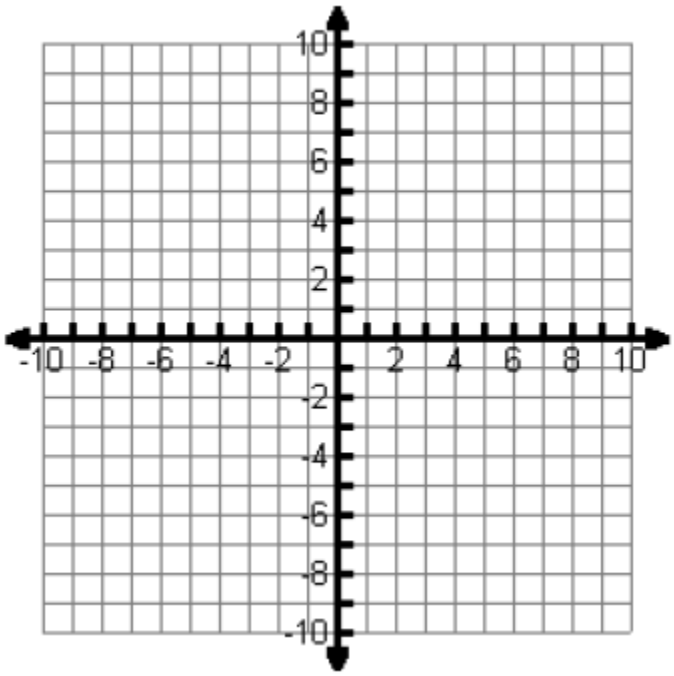
3. $f(x)=\begin{cases} -2x-4 & \text{if } x\leq 2 \\ 4x-9 & \text{if } x>2 \end{cases}$



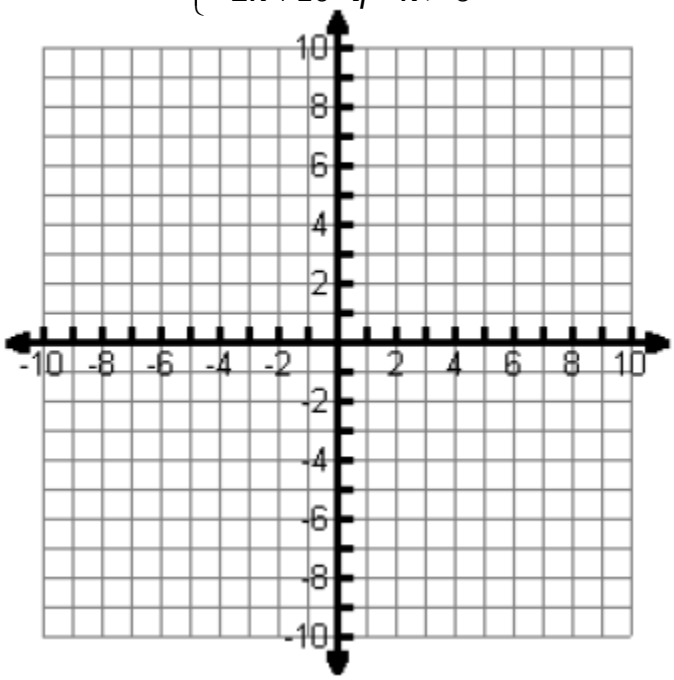
4. $f(x)=\begin{cases} x-1 & \text{if } x\leq -2 \\ 2x-1 & \text{if } -2<x\leq 4 \\ -3x+8 & \text{if } x>4 \end{cases}$



5. $$f(x)=\begin{cases} x & if \quad x\le -1 \\ -x+4 & if \quad x>-1 \end{cases}$$



6. $$f(x)=\begin{cases} 5 & if \quad x<-2 \\ \frac{1}{2}x-6 & if \quad -2\le x\le 6 \\ -2x+10 & if \quad x>6 \end{cases}$$



Evaluate the piecewise function for the given values of x.

1. $f(x)=\begin{cases} x+5 & if \quad x<-2 \\ -4 & if \quad x\ge -2 \end{cases}$ $f(3)=$ $f(-4)=$ $f(-2)=$	2. $f(x)=\begin{cases} 2x+1 & if \quad x<1 \\ -2x+3 & if \quad x>1 \end{cases}$ $f(-2)=$ $f(6)=$ $f(1)=$
3. $f(x)=\begin{cases} -2x-4 & if \quad x\le 2 \\ 4x-9 & if \quad x>2 \end{cases}$ $f(-4)=$ $f(8)=$ $f(2)=$	4. $f(x)=\begin{cases} x-1 & if \quad x\le -2 \\ 2x-1 & if \quad -2<x\le 4 \\ -3x+8 & if \quad x>4 \end{cases}$ $f(-1)=$ $f(-4)=$ $f(5)=$
5. $f(x)=\begin{cases} x & if \quad x\le -1 \\ -x+4 & if \quad x>-1 \end{cases}$ $f(-4)=$ $f(0)=$ $f(3)=$	6. $f(x)=\begin{cases} 5 & if \quad x<-2 \\ \frac{1}{2}x-6 & if \quad -2\le x\le 6 \\ -2x+10 & if \quad x>6 \end{cases}$ $f(-4)=$ $f(8)=$ $f(-2)=$