Piecewise Functions
Review #2
Senior Math

Name_____

Hour_____ Date_____

Using the given function input determine the output. *Decimals are possible

1. $f(x)=\begin{cases}-2x+8, & x<-2\\ -4, & -2\le x<5\\ \frac{1}{4}x-3, & x\ge 5\end{cases}$

a. f(16)

c. f(-2)

b. f(5)

d. f(-4)

2. $f(x)=\begin{cases}x, & x\le -7\\ -\frac{1}{2}x-2, & -7<x<-4\\ 4x-1, & x\ge -4\end{cases}$

a. f(-1)

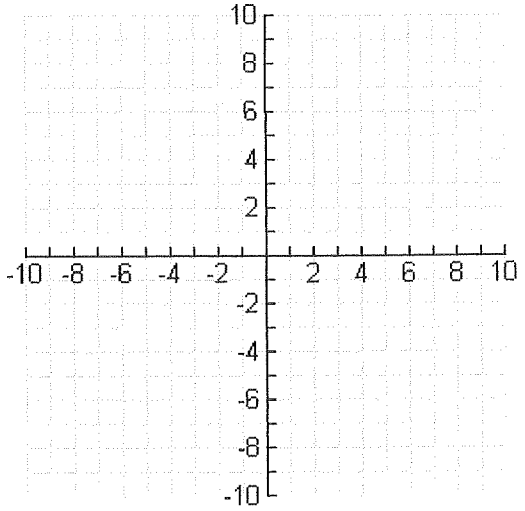
c. (-6)

b. f(-10)

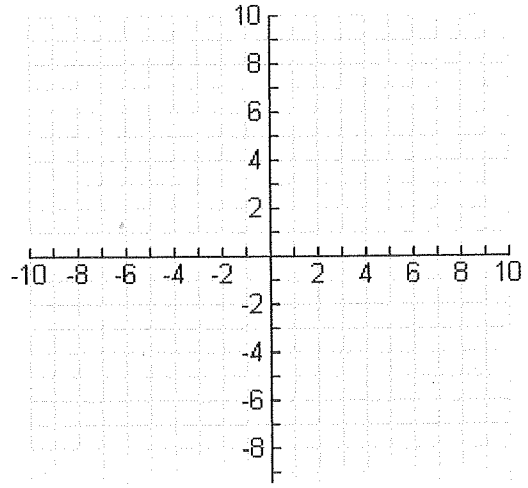
d. (0)

Graph each piecewise function.

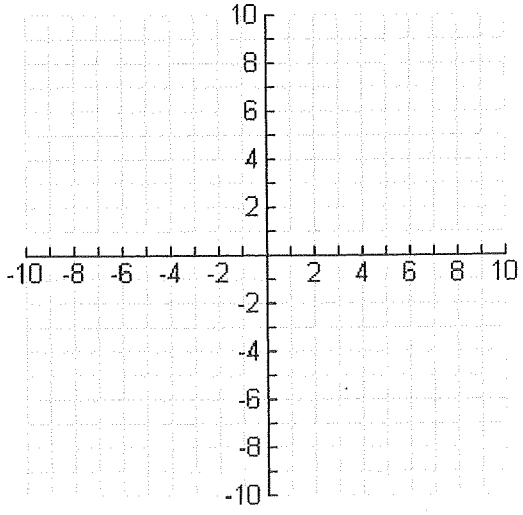
3. $f(x)=\begin{cases}-5, & x<-2\\ 3x-4, & -2\le x<3\\ -\frac{1}{3}+2, & x\ge 3\end{cases}$



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

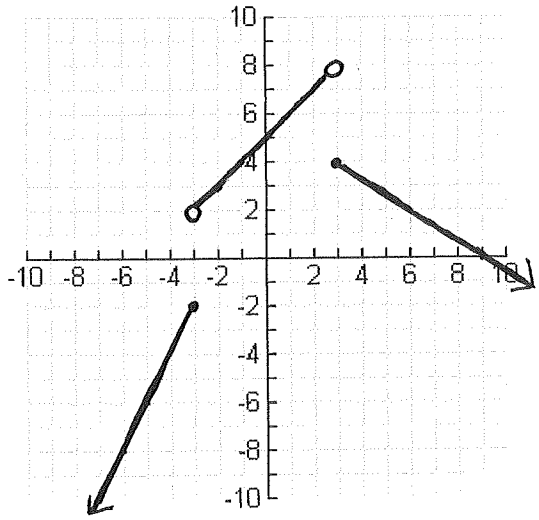


5. $f(x)=\begin{cases}-1, & x<-4\\ 6, & -4\le x<6\\ \frac{2}{3}x-6, & x\ge 6\end{cases}$



Write the piecewise equation for each function.

6.



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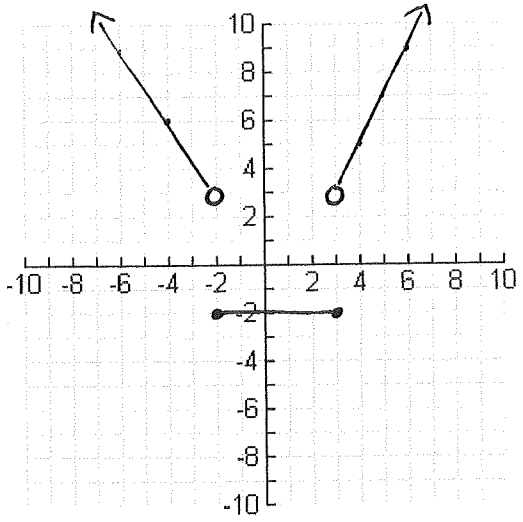
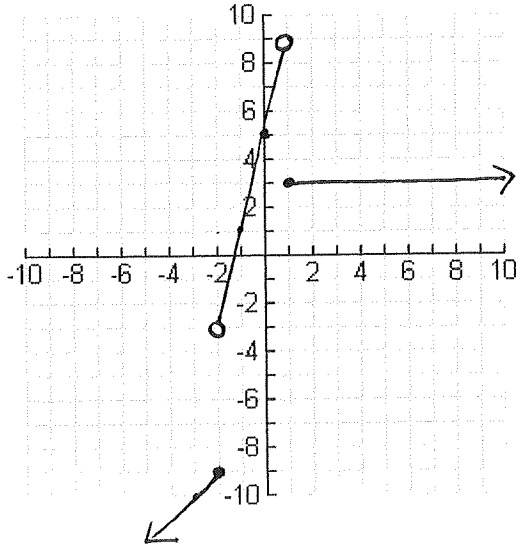


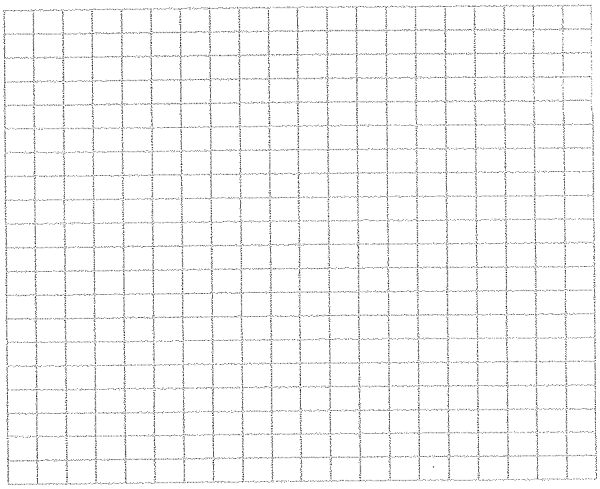
8.



9. You get a job at Old Navy for the summer making $8/hour. They pay you time and a half for overtime.

a. Write a piecewise equation that gives your weekly pay in terms of the number of hours you work.

b. Graph the piecewise function that gives your weekly pay in terms of the number of hours you work (Be sure to label the graph).



c. How much will you make if you work 30 hours?

d. How much will you make if you work 47 hours?

e. How many hours did you work if you made $392?