College Algebra

Name Namani

Unit 1 LT 2 Practice Day 1

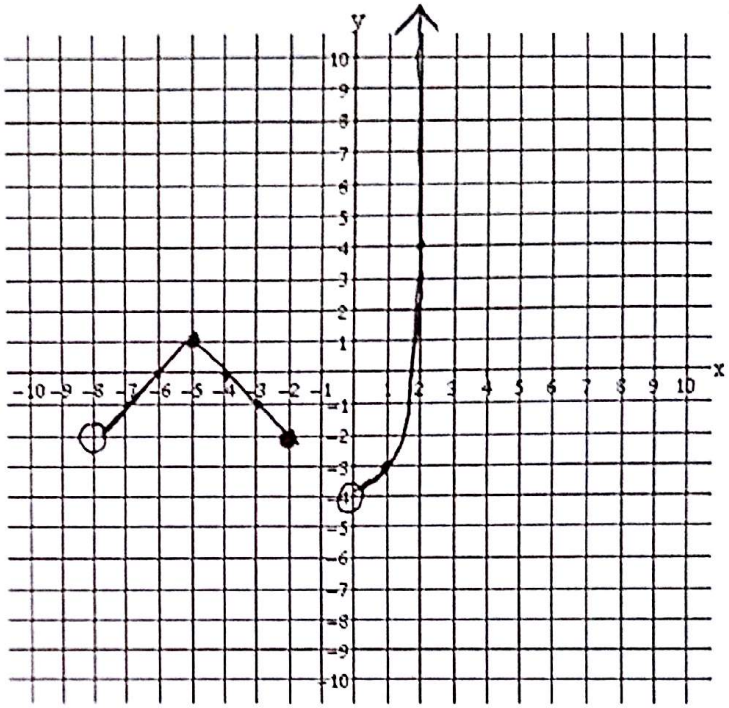
Date: _____ Period: _____

Graph each piecewise function and then state the domain and range.

1) $f(x)=\begin{cases} x^3-4 & x>0 \\ -|x+5|+1 & -8<x\le -2 \end{cases}$

x	f(x)
0	-4
1	-3
2	4

x	f(x)
-8	-2
-5	1
-2	-2



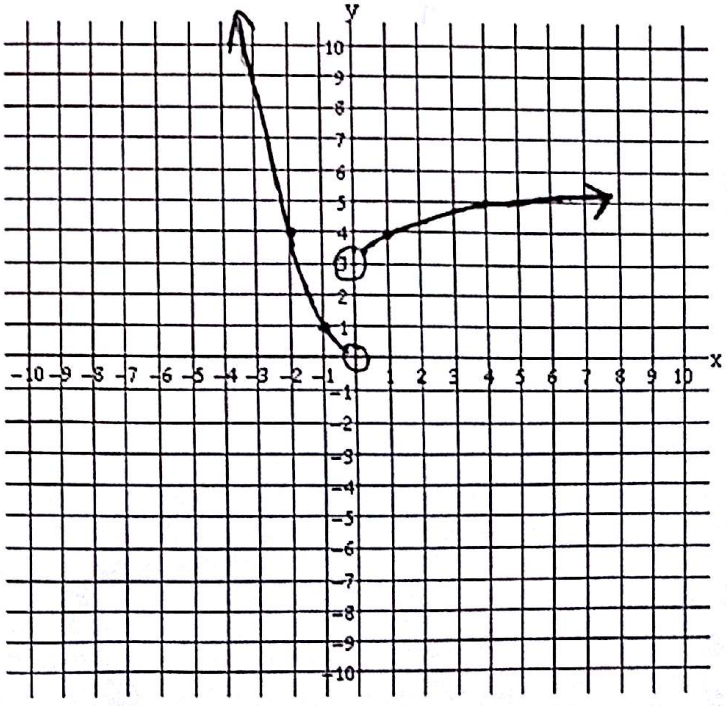
Domain: $(-8,-2]\cup(0,\infty)$

Range: $(-4,\infty)$

2) $f(x)=\begin{cases} x^2 & x<0 \\ \sqrt{x}+3 & x>0 \end{cases}$

x	f(x)
0	0
-1	1
-2	4

x	f(x)
0	3
1	4
4	5



Domain: $(-\infty,0)\cup(0,\infty)$

Range: $(0,\infty)$

3) $f(x)=\begin{cases}-3|x+2|+1 & x<-3\\ (x-1)^2-6 & -2<x\le 4\\ 2x-10 & x>4\end{cases}$

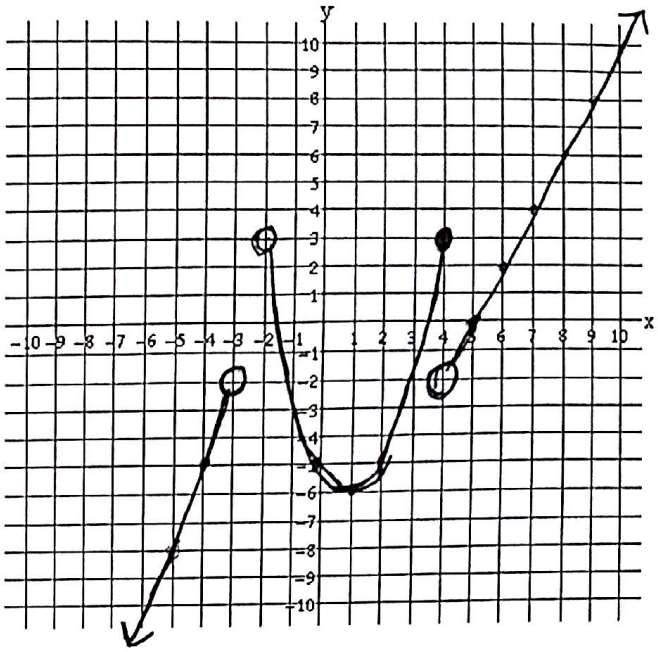
x	f(x)
-3	-2
-4	-5
-5	-8

x	f(x)
-2	3
0	-5
2	-5
4	3

x	f(x)
4	-2
5	0
6	2

Domain: $(-\infty,-3)\cup(-2,\infty)$

Range: $(-\infty,\infty)$



4) $f(x)=\begin{cases}\frac{1}{4}x & x\le -4\\ 10 & -2<x\le 1\\ \sqrt{x} & x>1\end{cases}$

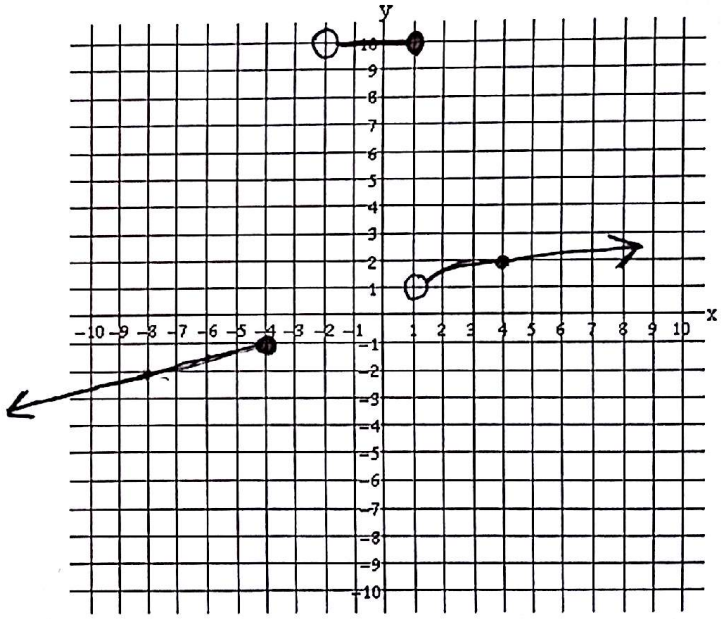
x	f(x)
-4	-1
-6	-1.5
-8	-2

x	f(x)
-2	10
1	10

x	f(x)
1	1
4	2

Domain: $(-\infty,-4]\cup(-2,\infty)$

Range: $(-\infty,-1]\cup(1,\infty)$



5) $f(x)=\begin{cases}-2x+3 & x\le 0\\ 2x^2 & 0<x\le 2\\ (x-6)^3-2 & x>6\end{cases}$

x	f(x)
0	3
-1	5
-2	7

x	f(x)
0	0
1	2
2	8

x	f(x)
6	-2
7	-1
8	6

Domain: $(-\infty,2]\cup(6,\infty)$

Range: $(-2,\infty)$