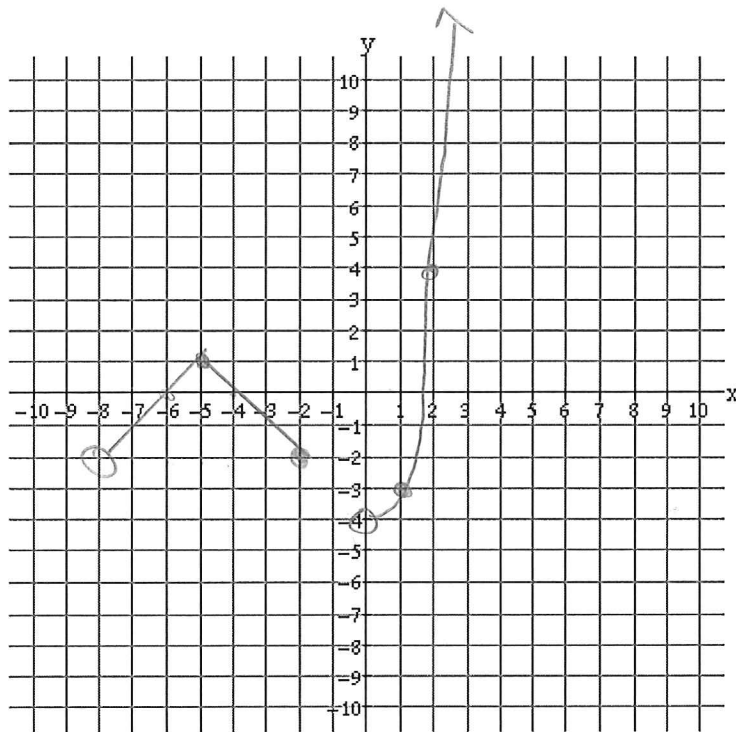


Graph each piecewise function and then state the domain and range.

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

x	
0	-4
1	-3
2	4

x	y
-8	-2
-6	0
-5	+1
-2	-2



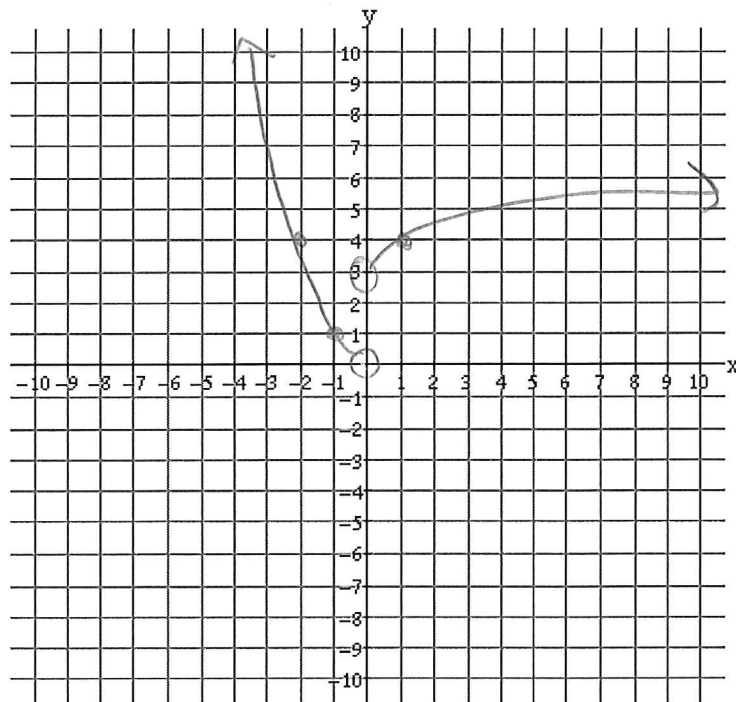
Domain: $(-8, -2] \cup (0, \infty)$

Range: $(-4, \infty)$

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

x	y
0	0
-1	1
-2	4

x	y
0	3
1	4
2	4.5



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

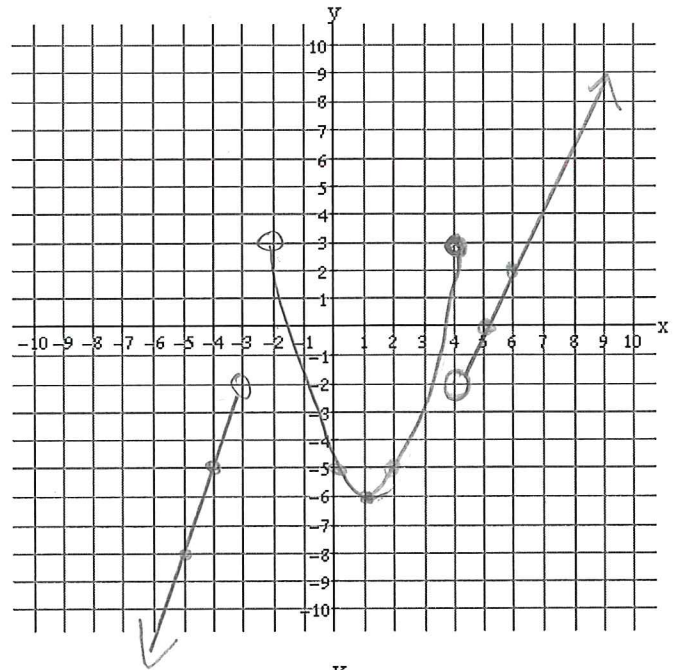
Range: $(0, \infty)$

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

x/y	x/y	x/y
$-3/-2$	$-2/3$	$4/3$
$-4/-5$		
$-5/-8$		

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

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

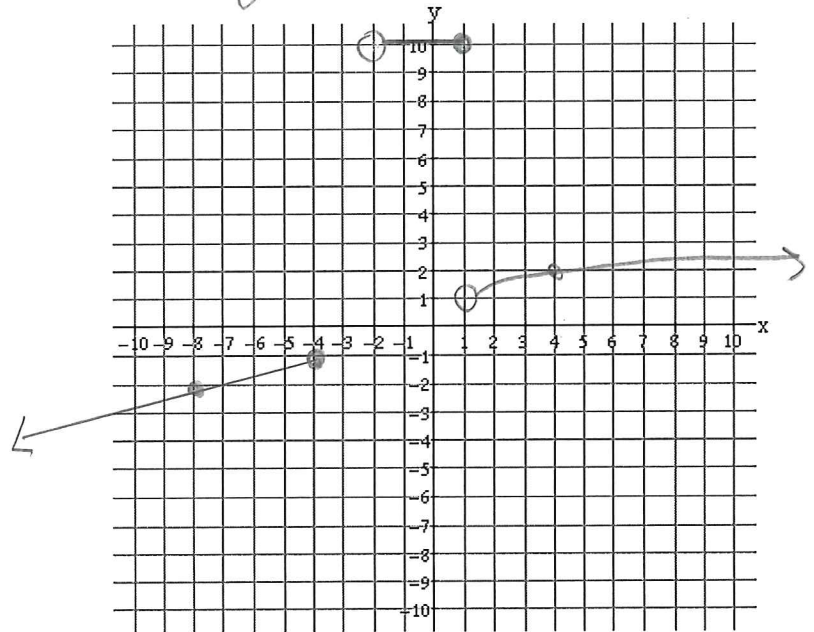


$$4) f(x) = \begin{cases} \frac{1}{4}x & x \leq -4 \\ 10 & -2 < x \leq 1 \\ \sqrt{x} & x > 1 \end{cases}$$

x/y	x/y	x/y
$-4/-1$	$-2/10$	$1/1$
$-5/-2$		
$-6/-2$		
$-8/-2$		

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

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



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

x/y	x/y	x/y
$0/3$	$0/0$	$6/-2$
$-1/5$	$1/2$	$7/-1$
$-2/7$	$2/8$	$8/4$

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

Range: $(-2, \infty)$

