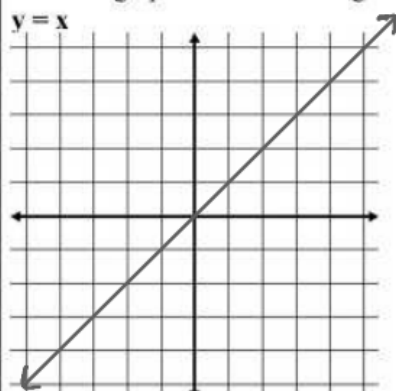


$f(1)$
 $f(-1)$

Sketch a graph of the following functions



1) Determine the domain and range

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

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

2) Is the function even, odd or neither

odd

3) Intervals of Increase or Decrease

$$\text{Inc } (-\infty, \infty)$$

4) Find any extrema.

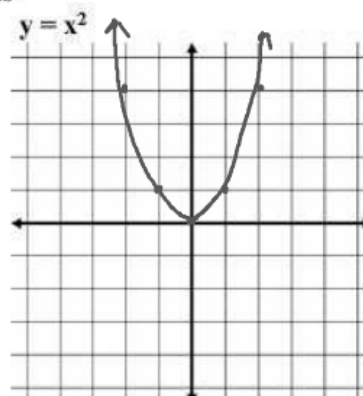
None

5) Determine the end behavior

$$\lim_{x \rightarrow \infty} f(x) = \infty \quad \lim_{x \rightarrow -\infty} f(x) = -\infty$$

6) Find any asymptotes

None



1) Determine the domain and range

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

$$R: [0, \infty)$$

2) Is the function even, odd or neither

Even

3) Intervals of Increase or Decrease

$$\text{Dec } (-\infty, 0)$$

$$\text{Inc } (0, \infty)$$

4) Find any extrema.

$$\text{min } (0, 0)$$

5) Determine the end behavior

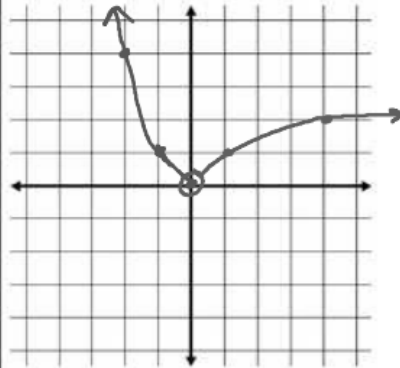
$$\lim_{x \rightarrow \pm\infty} f(x) = \infty$$

6) Find any asymptotes

None

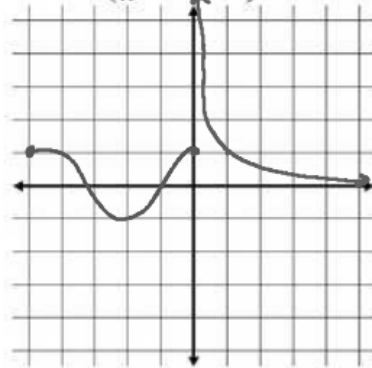
Graph each piecewise-defined function and give any points of discontinuity.

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



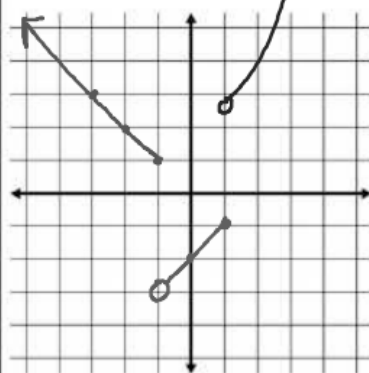
x	x ²	x	√x
0	0	0	0
-1	1	1	1
-2	4	4	2

$$f(x) = \begin{cases} \cos x & x \leq 0 \\ \frac{1}{x} & x > 0 \end{cases}$$



x	cos x	x	1/x
0	1		

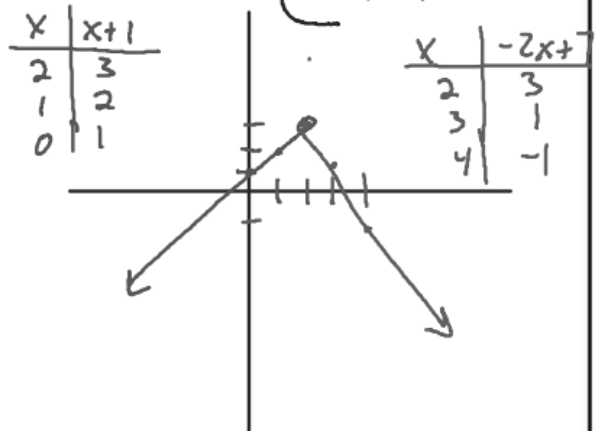
$$f(x) = \begin{cases} |x| & x \leq -1 \\ -2+x & -1 < x \leq 1 \\ e^x & x > 1 \end{cases}$$



x	x	x	-2+x
-1	1	-1	-3
-2	2	0	-2
-3	3	1	-1

x	e ^x
1	
2	
3	

$$f(x) = \begin{cases} x+1 & x < 2 \\ -2x+7 & x \geq 2 \end{cases}$$

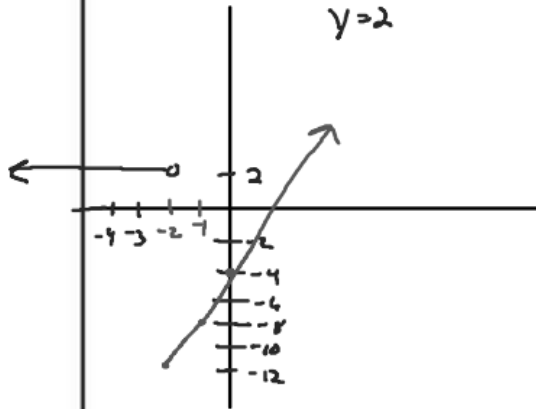


x	x+1
2	3
1	2
0	1

x	-2x+7
2	3
3	1
4	-1

$$f(x) = \begin{cases} 4x-4 & x \geq -2 \\ 2 & x < -2 \end{cases}$$

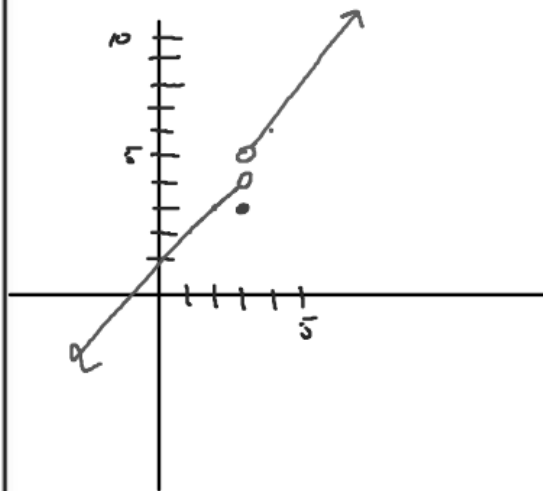
$y=2$



X	4x-4
-2	-12
-1	-8
0	-4

X	2
-2	2
-3	2
-4	2

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



x	x+1	x	x
3	4	3	3
2	3		
1	2		

x	x+2
3	5
4	6
5	7