Algebra 2: Piecewise Functions

Determine the value given.

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

1. f(-2) = $(-2)^2$ = 4 (-2, 4)

2. f(2) = $\sqrt{2}$ $(2, \sqrt{2})$

$(-1)^2$ $-1^2=-1$

$x \le 0$

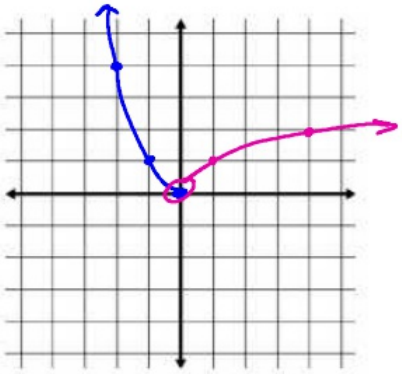
x	y
0	0
-1	1
-2	4

$x > 0$

x	y
0	0
1	1
4	2

Graph each piecewise-defined function and give any points of discontinuity. Then find the domain.

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



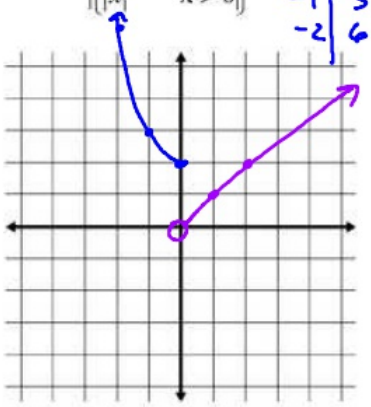
$$f(x)=\begin{cases} x^2+2 & x\le 0 \\ |x| & x>0 \end{cases}$$

$x \le 0$

x	y
0	2
-1	3
-2	6

$x > 0$

x	y
0	0
1	1
2	2



$$f(x)=\begin{cases} x & x<0 \\ -2 & 0\le x<2 \\ x+4 & x\ge 2 \end{cases}$$