

41. The range of  $m(x)$  is:

a)  $(-\infty, \infty)$

b)  $[-4, \infty)$

c)  $[2, \infty)$

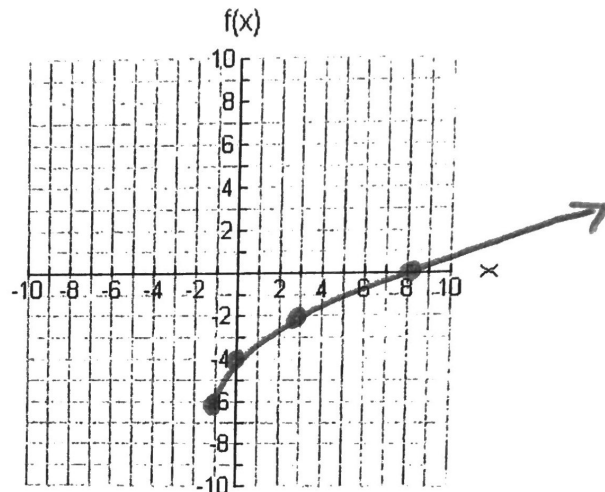
d)  $(-\infty, 2]$

Graph the following functions.

42.  $f(x) = 2\sqrt{x+1} - 6$

Transformations: vertical stretch of 2, left 1, down 6

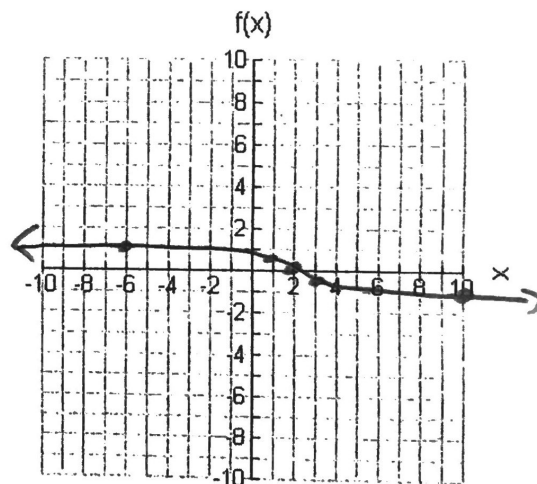
x	y	x-1	2y-6
0	0	-1	-6
1	1	0	-4
4	2	3	-2
9	3	8	0



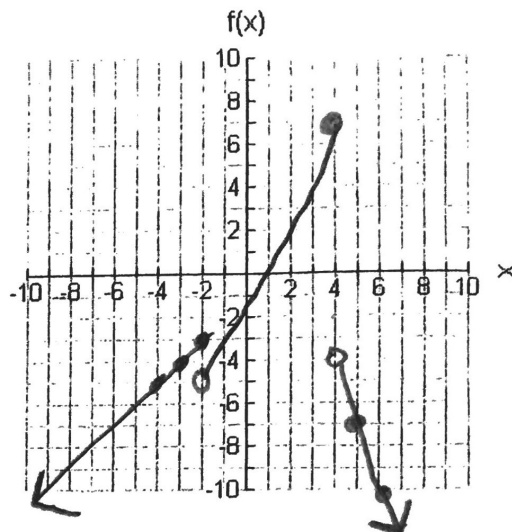
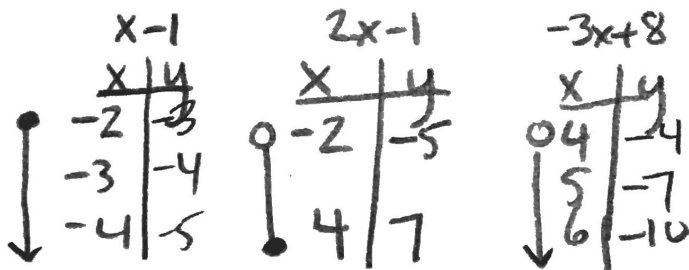
43.  $f(x) = -\frac{1}{2}\sqrt[3]{x-2}$

Transformations: reflection over x-axis, vertical shrink of 1/2, right 2

x	y	x+2	-1/2 y
-8	-2	-6	1
-1	-1	1	1/2
0	0	2	0
1	1	3	-1/2
8	2	10	-1



$$44. f(x) = \begin{cases} x-1 & x \leq -2 \\ 2x-1 & -2 < x \leq 4 \\ -3x+8 & x > 4 \end{cases}$$



Continuous or Discontinuous

Evaluate:

$f(3) = \underline{5}$

$f(-10) = \underline{-11}$

$f(10) = \underline{-22}$

$$45. f(x) = \begin{cases} -2 & x < -6 \\ 1 & -6 \leq x < -3 \\ 3 & -3 \leq x < 0 \\ 6 & 0 \leq x \leq 5 \end{cases}$$

