

5.3 Graphing Radical WS

Complete the t-chart for each of the following functions and then plot the points on the coordinate plane.

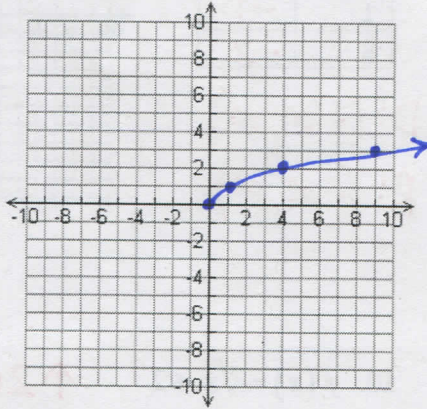
1. $f(x) = \sqrt{x}$

parent function

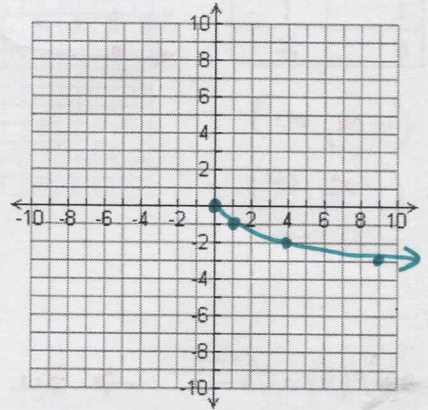
2. $f(x) = -\sqrt{x}$

R_x

x	y
-1	imag.
0	0
1	1
4	2
9	3
16	4



x	y
-1	imag.
0	0
1	-1
4	-2
9	-3
16	-4



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

D: $[0, \infty)$
R: $(-\infty, 0]$

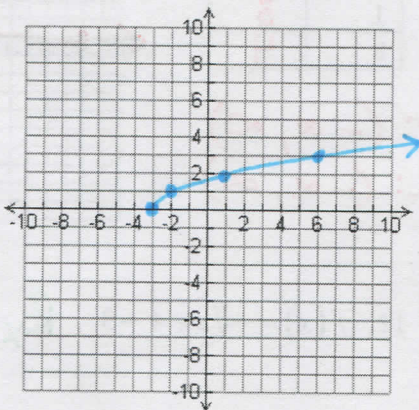
3. $f(x) = \sqrt{x+3}$

$\leftarrow 3$ units

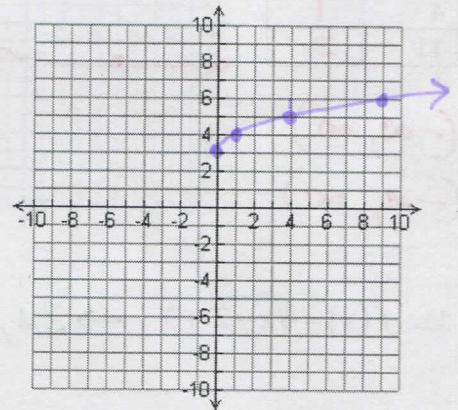
4. $f(x) = \sqrt{x} + 3$

$\uparrow 3$ units

x	y
-4	imag.
-3	0
-2	1
1	2
6	3



x	y
-1	imag.
0	3
1	4
4	5
9	6
16	7



D: $[-3, \infty)$
R: $[0, \infty)$

D: $[0, \infty)$
R: $[3, \infty)$

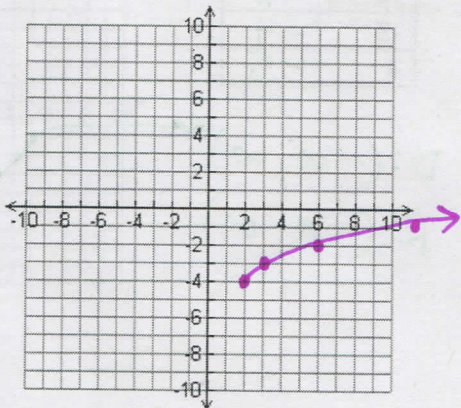
5. $f(x) = \sqrt{x-2} - 4$

$\rightarrow 2u, \downarrow 4u$

6. $f(x) = -\sqrt{x+4} + 2$

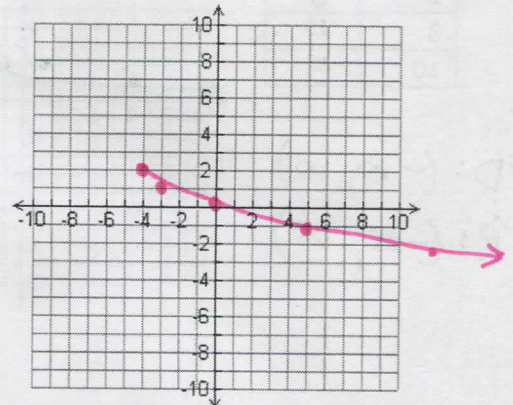
$R_x; \leftarrow 4u, \uparrow 2u$

x	y
1	imag.
2	-4
3	-3
6	-2
11	-1



D: $[2, \infty)$
R: $[4, \infty)$

x	y
-5	imag.
-4	2
-3	+1
0	0
5	-1
12	-2

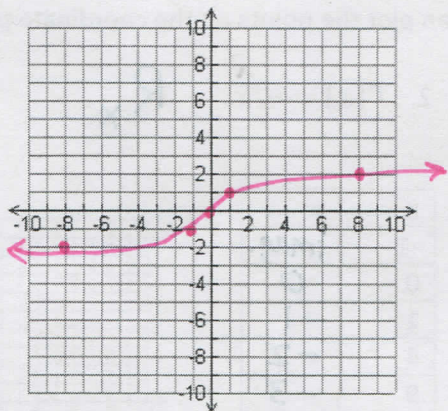


D: $[-4, \infty)$
R: $(-\infty, 2]$

7. $f(x) = \sqrt[3]{x}$

Parent function

x	y
-8	-2
-1	-1
0	0
1	1
8	2

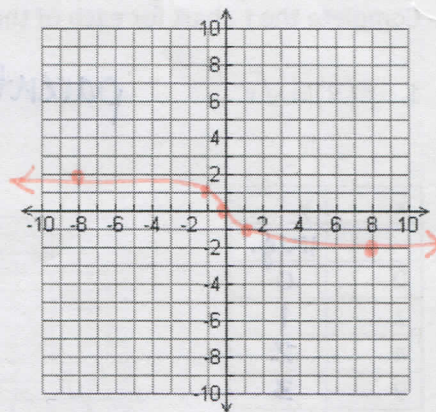


D: $(-\infty, \infty)$
R: $(-\infty, \infty)$

8. $f(x) = -\sqrt[3]{x}$

R_x

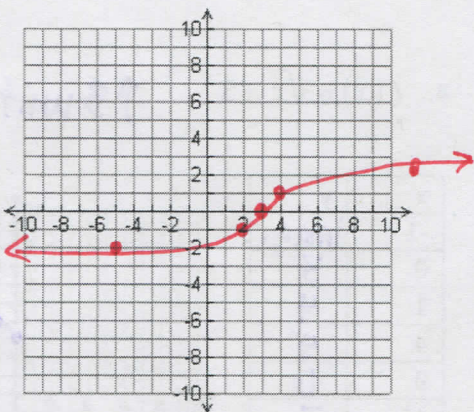
x	y
-8	2
-1	1
0	0
1	-1
8	-2



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

9. $f(x) = \sqrt[3]{x-3}$ $\rightarrow 3u$

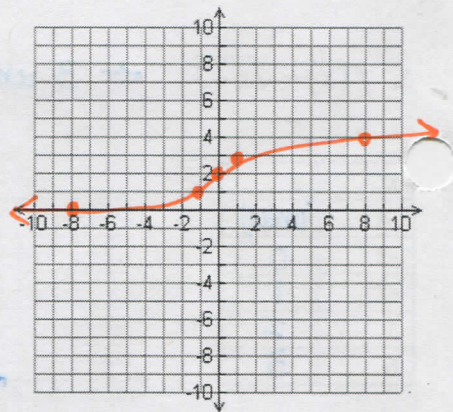
x	y
-5	-2
2	-1
3	0
4	1
11	2



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

10. $f(x) = \sqrt[3]{x} + 2$ $\uparrow 2u$

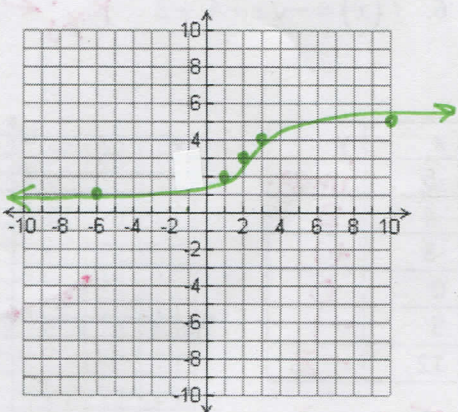
x	y
-8	0
-1	1
0	2
1	3
8	4



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

11. $f(x) = \sqrt[3]{x-2} + 3$ $\rightarrow 2u, \uparrow 3u$

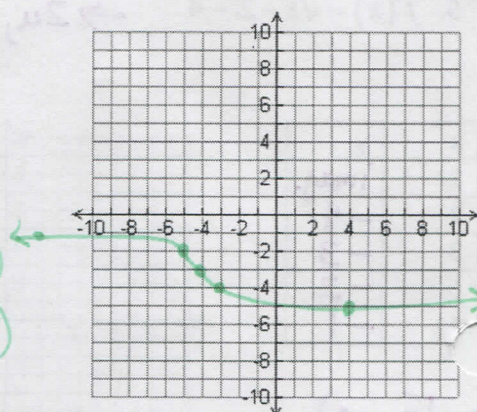
x	y
-6	1
1	2
2	3
3	4
10	5



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

12. $f(x) = -\sqrt[3]{x+4} - 3$ $R_x; \leftarrow 4u; \downarrow 3u$

x	y
-12	-1
-5	-2
-4	-3
-3	-4
4	-5



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