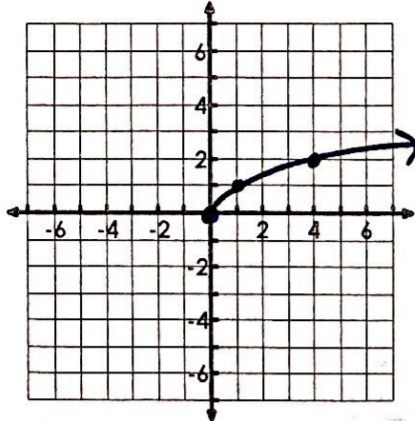


Radical Function: a function whose rule is a radical expression.

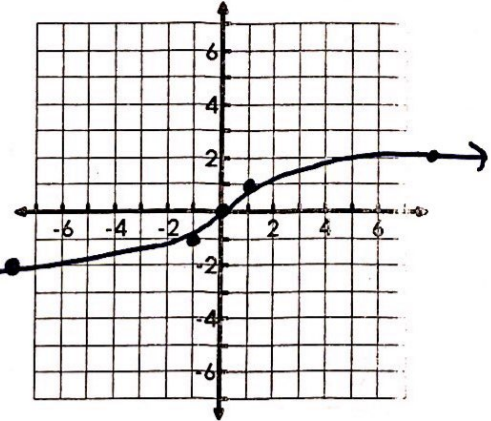
1. $f(x) = \sqrt{x}$

X	Y
0	0
1	1
4	2



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

X	Y
-8	-2
-1	-1
0	0
1	1
8	2



* Square root needs 3pts.

* Cube root requires 5 pts.

$f(x) = a\sqrt{b(x-h)} + k$, where (h,k) is the starting point.

- a: If negative, reflects x-axis. $a > 1$, vertical stretch
 $0 < a < 1$, vertical shrink
- b: If negative, reflects y-axis. $b > 1$, horizontal shrink
 $0 < b < 1$, horizontal stretch

h: Right (-) OR Left (+)

k: Up (+) OR Down (-)

Describe the transformation.

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

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

5. $f(x) = -\frac{1}{3}\sqrt{x}$

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

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

8. $f(x) = \sqrt{\frac{1}{4}x}$

Reflect y-axis

Vertical stretch

Horizontal shrink

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

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

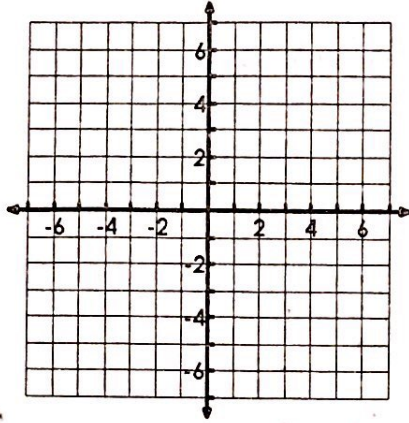
11. $f(x) = -2\sqrt{x+2} + 4$

Reflect x-axis
Right 3

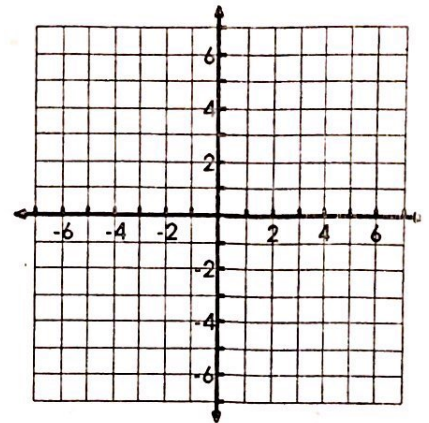
Down 5

Reflect x-axis
Vertical stretch
Left 2
Up 4

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

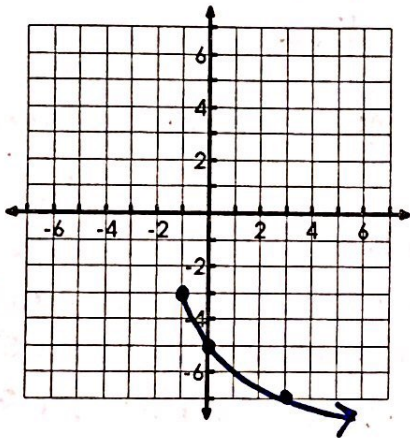


13. $f(x) = -\sqrt[3]{x} + 2$



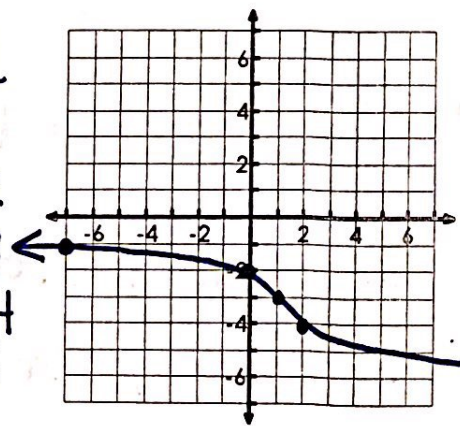
14. $f(x) = -2\sqrt{x+1} - 3$

X	Y
-1	-3
0	-5
3	-7



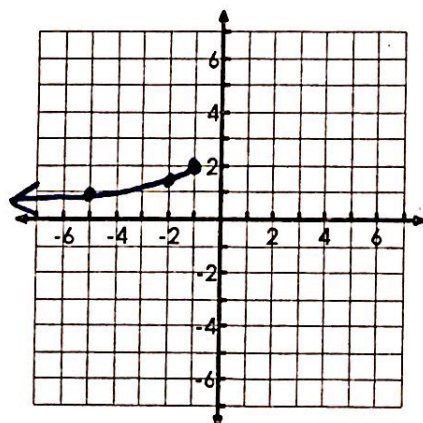
15. $f(x) = -\sqrt[3]{x-1} - 3$

X	Y
-7	-1
0	-2
1	-3
2	-4
9	-5



16. $f(x) = \frac{-1}{2}\sqrt{-x-1} + 2$

X	Y
-1	2
-2	1.5
-5	1



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

X	Y
-6	5
1	3
2	1
3	-1
10	-3

