

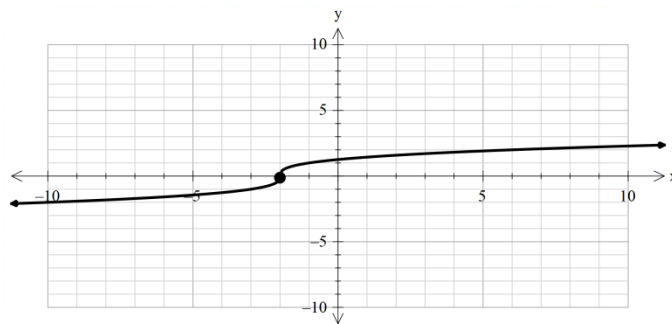
### SM3H 2.5 odd answers

1. g, linear
3. h, greatest integer
5. e, cube root
7. f, absolute value
9. horizontal, right
11. vertical, up
13. False
15. a) reflection across x-axis b) vertical shrink by factor of  $1/2$  c) vertical shift up 5
17. a) horizontal shift left 5, vertical shift down 1 b) horizontal shrink by a factor of  $1/2$ , vertical shift up 7 c) vertical shrink by a factor of  $1/3$ , horizontal shift right 1
19. parent function:  $y = \sqrt[3]{x}$ , transformation: horizontal shift left 2

Parent table for  $y = \sqrt[3]{x}$ :

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

table for  $f(x) = \sqrt[3]{x+2}$



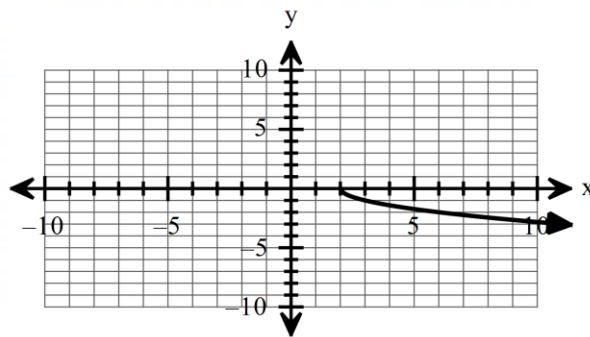
x-2	y
-3	-1
-2	0
-1	1
6	2

21. parent function:  $y = \sqrt{x}$ , transformations: reflection across x-axis, horizontal shift right 2

Parent table for  $y = \sqrt{x}$ :

x	y
0	0
1	1
4	2
9	3
16	4

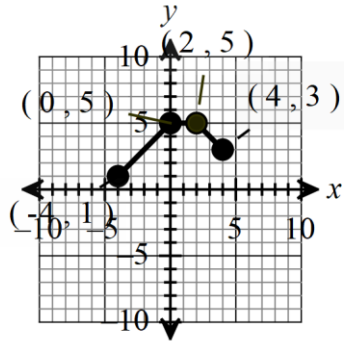
table for  $f(x) = -\sqrt{x-2}$ :



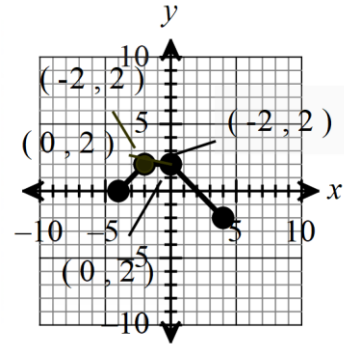
x+2	-y
2	0
3	-1
6	-2
11	-3
18	-4

23. a)  $-f(x) = -x^3 + 2x^2 + 3x - 5$  b)  $f(-x) = -x^3 - 2x^2 + 3x + 5$
25. a)  $-f(x) = -\sqrt[3]{27x}$  b)  $f(-x) = \sqrt[3]{-27x}$  should simplify to  $-f(x) = -3\sqrt[3]{x}$  and  $f(-x) = -3\sqrt[3]{x}$
27.  $y = x^3$ , reflection across the x-axis, horizontal shift right 4, vertical shift down 2
29.  $y = x^2$ , reflection across the x-axis, vertical stretch by a factor of 2, horizontal shift right 1, vertical shift up 5
31.  $f(x) = 2\sqrt[3]{x+3}$

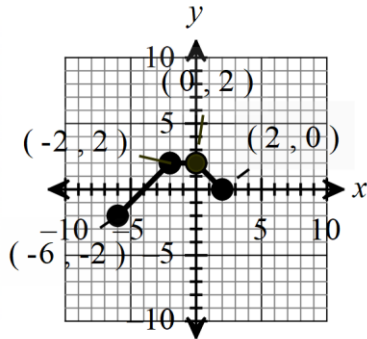
33a.



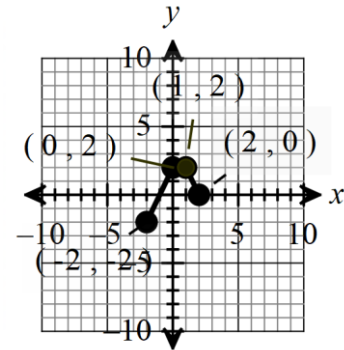
33f.



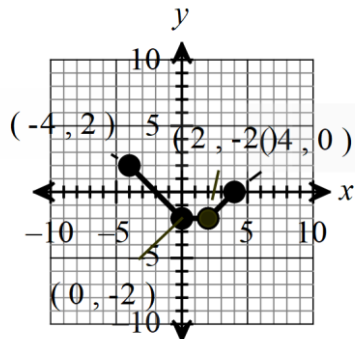
33b.



33g.

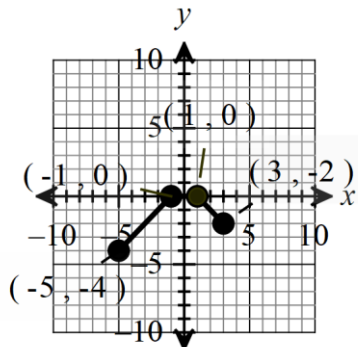


33c.



35.  $x - 7 + \frac{5}{x+5}$

33d.



33e.

