MATH 195

§ 2.2 GRAPHS OF FUNCTIONS

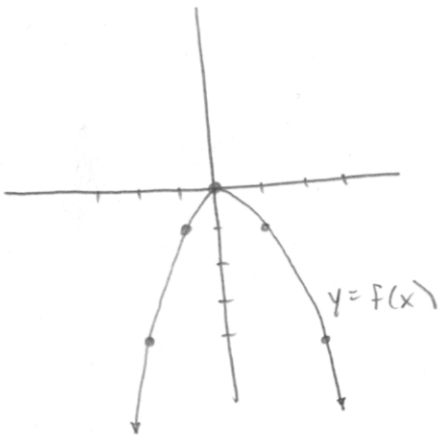
3, 4, 9, 15, 17, 19, 41, 45, 49, 51, 57, 61

3. 7

4. (a) IV (c) I
   (b) II (d) III

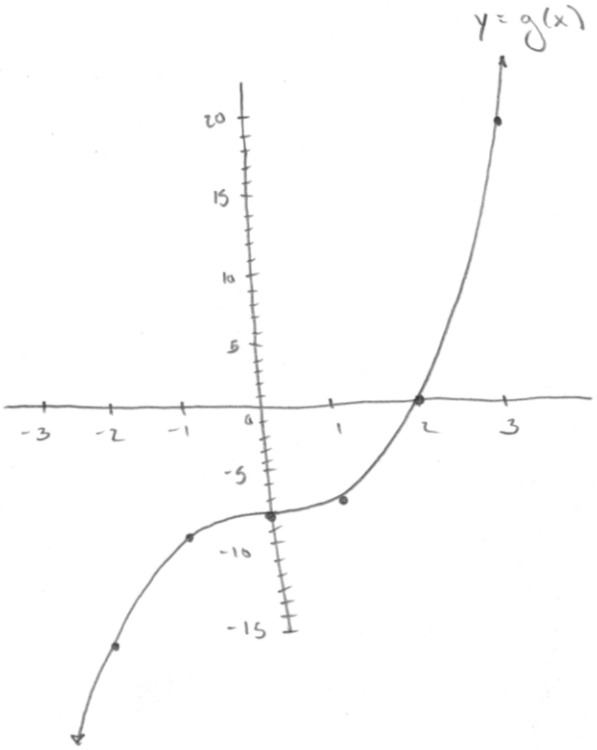
9. $f(x) = -x^2$

x	f(x)
-2	-4
-1	-1
0	0
1	-1
2	-4



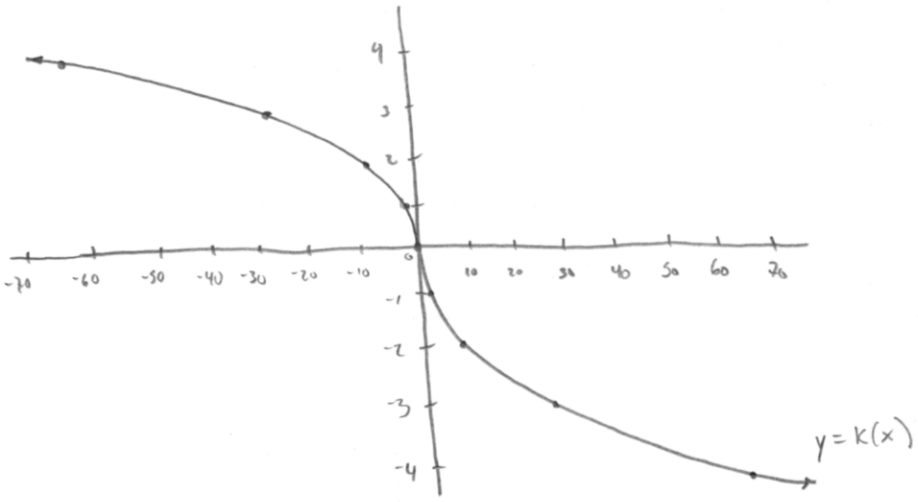
15. $g(x) = x^3 - 8$

x	g(x)
-2	-16
-1	-9
0	-8
1	-7
2	0
3	19



17. $k(x) = \sqrt[3]{-x}$

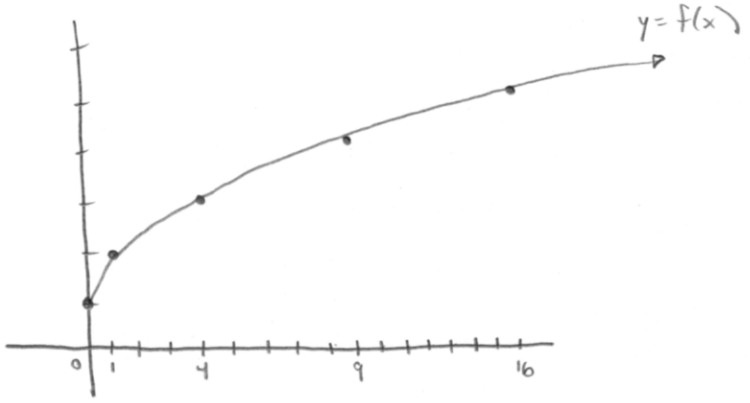
x	$k(x)$
-64	4
-27	3
-8	2
-1	1
0	0
1	-1
8	-2
27	-3
64	-4



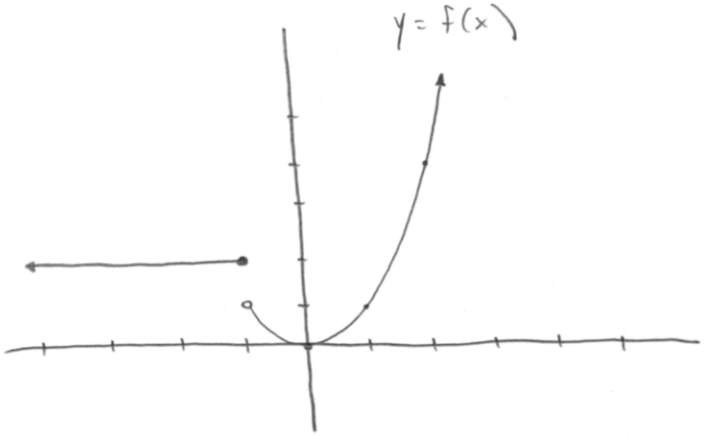
19. $f(x) = 1 + \sqrt{x}$

x	$f(x)$
0	1
1	2
4	3
9	4
16	5
⋮	

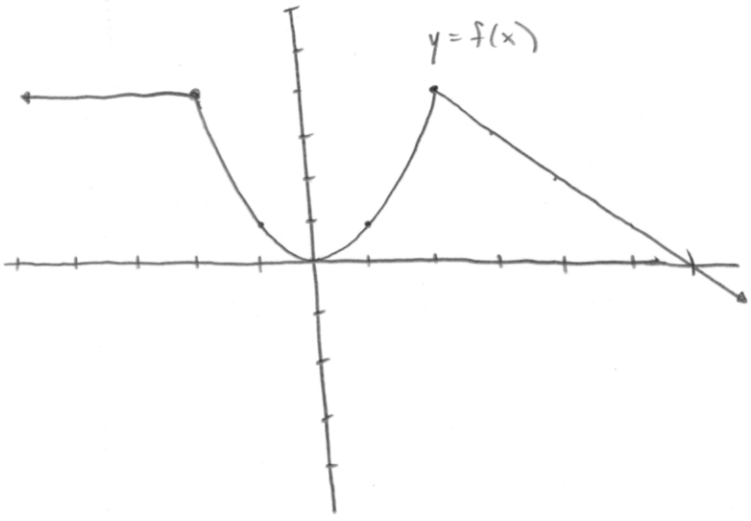
NOTE THE DOMAIN OF f



41. $f(x) = \begin{cases} 2 & \text{IF } x \leq -1 \\ x^2 & \text{IF } x > -1 \end{cases}$



45. $$f(x) = \begin{cases} 4 & \text{IF } x < -2 \\ x^2 & \text{IF } -2 \le x \le 2 \\ -x+6 & \text{IF } x > 2 \end{cases}$$



49. $$f(x) = \begin{cases} -2 & \text{IF } x < -2 \\ x & \text{IF } -2 \le x \le 2 \\ 2 & \text{IF } x > 2 \end{cases}$$

51. (a) Yes ✓

(b) No ✗

(c) Yes ✓

(d) No ✗

57. $3x - 5y = 7$ Solve for y.

$-5y = -3x + 7$

$y = \frac{3}{5}x - \frac{7}{5}$

Yes

61. $2x - 4y^2 = 3$ Solve for y.

$-4y^2 = -2x + 3$

$y^2 = \frac{1}{2}x - \frac{3}{4}$

$y = \pm\sqrt{\frac{1}{2}x - \frac{3}{4}}$

More than 1 output!

No

Not a function!