3.2 day 1 hw

Tuesday, October 15, 2013 7:16 PM

pg. 184 #3, 9-14, 15-20, 27-35 odd, 37, 38

3. A function can only have 1 y-intercept.

9. A. $[-4,4)$
B. $[-3,3)$
C. 0
D. 0
E. $[-4,4)$
F. NONE
G. NONE
H. NONE

10. A. $(-5,5]$
B. $[-4,4)$
C. 0
D. 0
E. NONE
F. $(-5,5]$
G. NONE
H. NONE

11. A. $(-\infty,\infty)$
B. $[-4,\infty)$
C. $-3, 1$
D. -3
E. $[-1,\infty)$
F. $(-\infty,-1]$
G. NONE
H. NONE

12. A. $(-\infty,\infty)$
B. $(-\infty,3]$
C. 0, 4
D. 0
E. $(-\infty,2]$
F. $[2,\infty)$
G. NONE
H. NONE

13. A. $(-\infty,2)\cup(2,\infty)$
B. $(-\infty,-1]\cup[1,\infty)$
C. NONE
D. 1
E. NONE
F. $(-\infty,-2]\cup(2,\infty)$
G. $[-2,2)$
H. 2

14. A. $(-\infty,-3)\cup(-3,\infty)$
B. $(-\infty,-2)\cup(2,\infty)$
C. NONE
D. 2
E. $(-\infty,-3)\cup[3,\infty)$
F. NONE
G. $(-3,3]$
H. -3

15. $f(-4) = -3$
$f(0) = 0$

16. $g(-5)$ is undefined
$g(2) = 0$

15. $f(-4) = -3$
$f(0) = 0$
$f(4)$ is undefined

16. $g(-5)$ is undefined
$g(0) = 0$
$g(5) = -4$

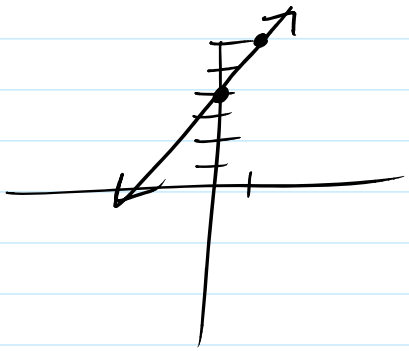
17. $h(-3) = 0$
$h(0) = -3$
$h(2) = 5$

18. $k(0) = 0$
$k(2) = 3$
$k(4) = 0$

19. $p(-2) = 1$
$p(2)$ is undefined
$p(5) = -4$

20. $g(-4) = -3$
$g(-3)$ is undefined
$g(1) = 2$

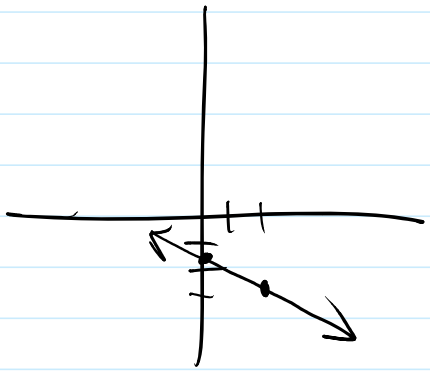
27. $f(x) = 2x + 4$
slope $= 2$
y-int $= 4$



29. $f(x) = \frac{-1}{2}x - \frac{5}{3}$

slope $= \frac{-1}{2}$

y-int $= \frac{-5}{3}$

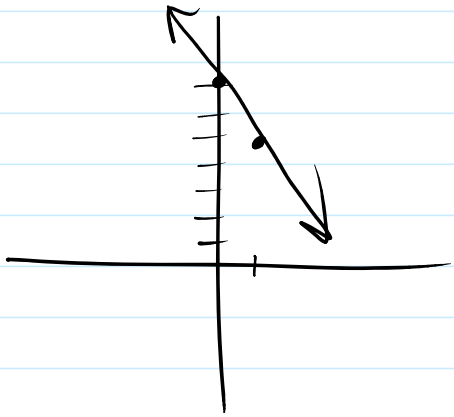


31. $f(x) = -2.3x + 7.1$

31. $f(x) = -2.3x + 7.1$

slope $= -2.3$

y-int $= 7.1$



33. $f(-2) = 2 \qquad f(0) = 10$ (y-int!)

$$m = \frac{10-2}{0--2} = \frac{8}{2} = 4$$

$$f(x) = 4x + 10$$

35. $f(-2) = 7 \qquad f(4) = -2$

$$m = \frac{-2-7}{4--2} = \frac{-9}{6} = -\frac{3}{2}$$

$$f(x) - 7 = -\frac{3}{2}(x+2)$$

$$f(x) = -\frac{3}{2}(x+2) + 7$$

37. $f(x) = \frac{3x-12}{2x+4}$

D: $(-\infty, -2) \cup (-2, \infty)$

x-int: $0 = f(x)$

$$0 = \frac{3x-12}{2x+4} \quad \Rightarrow \quad 3x-12=0$$

$$3x=12$$

$$x=4$$

y-int: $f(0) = \frac{3\cdot 0-12}{2\cdot 0+4} = \frac{-12}{4} = -3$

38. $f(x) = \frac{2x+9}{x-3}$

D: $(-\infty, 3) \cup (3, \infty)$

x-int: $0 = \frac{2x+9}{x-3} \quad \Rightarrow \quad 2x+9=0$

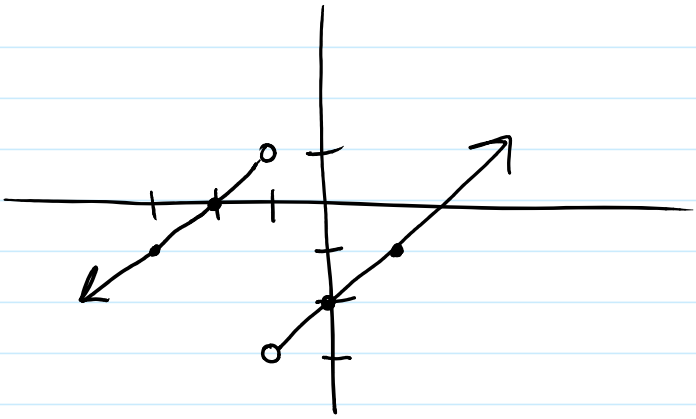
$$x = -\frac{9}{2}$$

y-int: $f(0) = \frac{2\cdot 0+9}{0-3} = \frac{9}{-3} = -3$

51. $f(-2) = 0$

$f(-1)$ is undefined

$f(0) = -2$



60. $f(x) = \begin{cases} 2x+2, & x<0 \\ 2x-2, & x \geq 0 \end{cases}$