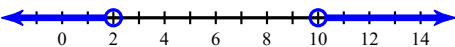


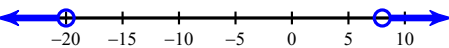
Answers to Math-1050 Unit 1 Test Preview HW (ID: 1)

1) $\{8, -10\}$

3) $\{-6, 7\}$

5) $\left\{-\frac{11}{5}, 3\right\}$

7) $x > 10$ or $x < 2$: 

9) $x > 8$ or $x < -20$: 

11) no.

(1) If rewritten as $y = f(x)$

then the equation becomes two equations: $y = \sqrt{10 - x^2}$ and $y = -\sqrt{10 - x^2}$
the top and bottom halves of circles--> fails vertical line test.

(2) $x = 1$ has two possible output values:

$y = 3$ and $y = -3$

13) $x \neq 4, x \neq -4$

15) $x \geq -\frac{7}{2}$

17) $\frac{-3x + 5}{x - 5}$

19) $6n^2 + 10n + 4$

21) 61

23) 66

25) (a) $f(0)=3$

(b) $f(-3)=0, f(2)=0, f(5)=0$

(c) $f(-2)=3$

(d) local max at $(-1, 3.5)$

local min at $(3.7, -1.5)$

27) a) $(0,2)$ (b) VSF = 3, up 2

29) $y = -3(x + 2)^2 + 4$

31) a) vertex: $(7, -54)$

b) $x = 7$

c) $7 + 3\sqrt{6}, 7 - 3\sqrt{6}$

33) a) $R = p(1500 - 25P)$

b) Price = \$30

c) Max Revenue = \$22,500

d) Number of units: $x = 750$

35) a) $(2, 10), (4, -5), (-6, 7)$

b) $(5, 3), (7, -2), (-3, 2)$

c) $(1, 1), (2, -4), (-3, 0)$

37) $8 \leq x \leq 4$