

2.1 Pg 59 (1, 11, 14, 17-20, 51-58)

Note  
Textbook  
answers  
wrong

1.  $f(x) = -5x + 6$   
 $f(3) = -5(3) + 6 = -15 + 6 = -9$   
 $f(-3) = -5(-3) + 6 = 15 + 6 = 21$   
 $f(9) = -5(9) + 6 = -45 + 6 = -39$   
 $f(-9) = -5(-9) + 6 = 45 + 6 = 51$   
 $f(9+3) = -5(9+3) + 6 = -5(12) + 6 = -60 + 6 = -54$

11.  $f(x) = \begin{cases} x^2 + 1 & \text{if } x \leq 0 \\ \sqrt{x} & \text{if } x > 0 \end{cases}$

$f(-2) = (-2)^2 + 1 = 4 + 1 = 5$

$f(0) = 0^2 + 1 = 0 + 1 = 1$

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

14.  $f(x) = \begin{cases} 2 + \sqrt{1-x} & \text{if } x \leq 1 \\ \frac{1}{1-x} & \text{if } x > 1 \end{cases}$

$f(0) = 2 + \sqrt{1-0} = 2 + \sqrt{1} = 2 + 1 = 3$

$f(1) = 2 + \sqrt{1-1} = 2 + \sqrt{0} = 2 + 0 = 2$

$f(2) = \frac{1}{1-2} = \frac{1}{-1} = -1$

Textbook  
wrong

17.  $(2, \sqrt{3})$ ;  $g(x) = \sqrt{x^2 + 1}$ ;  $\sqrt{3} \neq \sqrt{5}$  NO

18.  $(3, 3)$ ;  $f(x) = \frac{(x+1)}{\sqrt{x^2+7}} + 2$ ;  $3 \neq \frac{4+2}{4}$  YES

19.  $(-2, -3)$ ;  $f(x) = |x-1|/(x+1)$ ;  $-3 \neq \frac{|-2-1|}{-2+1}$  YES

20.  $(-3, -\frac{1}{13})$ ;  $h(x) = \frac{|x+1|}{(x^2+1)}$ ;  $-\frac{1}{13} \neq \frac{2}{10}$  NO

(Cont.) 2.1 Pg 61 (51-58)

