

Page 258 Exercise Set

$$(76) \quad g(x) = 2x - 5 \quad f(x) = x^3$$

$$(78) \quad g(x) = 5x^2 + 3 \quad f(x) = \sqrt{x}$$

$$(80) \quad g(x) = 3x - 4 \quad f(x) = |x|$$

$$(82) \quad g(x) = 4x + 5 \quad f(x) = \frac{1}{x}$$

$$(84) \quad (g - f)(-2) \rightarrow g(-2) - f(-2) \rightarrow 2 - 3 = -1$$

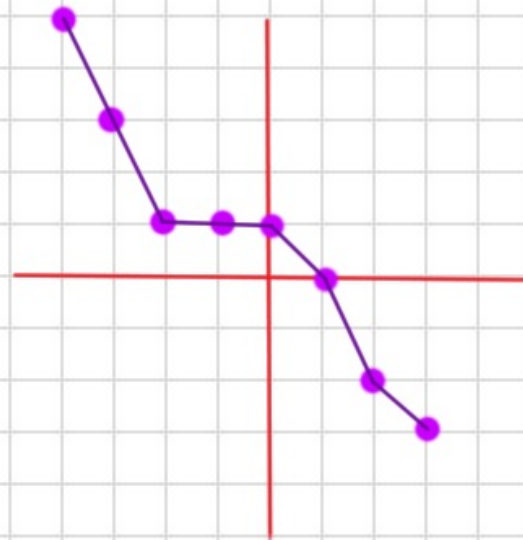
$$(86) \quad \left(\frac{g}{f}\right)(3) \rightarrow \frac{g(3)}{f(3)} \rightarrow \frac{0}{-3} = 0$$

$$(88) \quad \text{Domain of } \frac{f}{g} \rightarrow f(x) \text{ has a } [-4, 3] \quad g(x) \text{ is zero at } x - 4 \leq 3 \text{ so...}$$

the $\frac{f}{g}$ domain is $(-4, 3)$

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X	$f(x) - g(x)$	Y
-4	5 - 0	5
-3	4 - 1	3
-2	3 - 2	1
-1	3 - 2	1
0	2 - 1	1
1	1 - 1	0
2	-1 - 1	-2
3	-3 - 0	-3



$$\textcircled{92} \quad f \circ g(1) \rightarrow f[g(1)] \rightarrow f[-5] \rightarrow 3$$

$$\textcircled{94} \quad g \circ f(-1) \rightarrow g[f(-1)] \rightarrow g(1) \rightarrow -5$$

$$\textcircled{98} \quad \text{a) } F(x) - M(x) \rightarrow (1.44x + 120.9) - (1.48x + 115.1) \\ \rightarrow -0.04x + 5.8$$

$$\text{b) } F(25) - M(25) \rightarrow -0.04(25) + 5.8 = 4.8 \text{ more W than M}$$

c) at 2010 $\rightarrow 157 - 152 = 5$ so part b is an underestimation by 0.2 million.

100 a) slope of $f(x) = -0.44x + 13.62$ is -0.44 . This means the profit of this dept store decreases 0.44 million/year over the years 2012-2016.

b) slope of $g(x) = 0.51x + 11.14$ is 0.51 . This means the profit of this dept store increases 0.51 million/year over the years 2012-2016.

c) when you add the slopes of the two stores together, you get 0.07 which means the combined profit between the two stores is 0.07 million over the years 2012-2016.

