

## Lesson 3.2.4

3-97.  $\frac{11}{15}$

- a. Diagrams and situations will vary.
- b. Answers will vary.

3-98.  $\frac{2x^2+13x+1}{(x-1)(x+5)}$

3-99. See below:

- a.  $\frac{x-2}{x-5}$
- b.  $\frac{2x-3}{x+3}$

3-100. See below:

- a. The first term needs to be multiplied on top and bottom by  $x - 7$ , while the second expression needs to be multiplied on top and bottom by  $3x + 1$ .
- b.  $\frac{5x^2+5x+10}{(x+4)(x-7)(3x+1)}$
- c.  $\frac{x+2}{x+4}$



3-102. See below:

- a. Because if  $x = 4$ , then the denominator is zero. Since dividing by zero makes the expression undefined,  $x \neq 4$ .
- b. a:  $x \neq -\frac{1}{3}$  and  $x \neq 5$ ; b:  $x \neq 3$  or  $-3$
- c. Answers vary.

**3-103. See below:**

a.  $\frac{8x+8}{(x-4)(x+2)}$

b.  $\frac{1}{x+2}$

**3-104. See below:**

a. all real numbers

b.  $-5 < x < 4$

c. no solution

d.  $x = \frac{1}{3}$

**3-105. See below:**

a.  $x - 4$

b.  $\frac{7m-1}{3m+2}$

c.  $\frac{(4z-1)^2}{z+2}$

d.  $\frac{x-3}{x-2}$

**3-106. See below:**

a. 1722

b. 1368

c.  $y = 1500(1.047)^{n+3}$

**3-107. See below:**

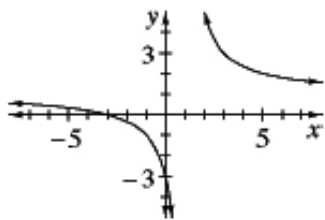
a.  $\frac{5(3x-1)}{2(4x+1)}$

b. 1

c. 3

d.  $-m^2$

**3-108.** See graph below;  $x$ -intercept:  $(-2, 0)$ ,  $y$ -intercept:  $(0, -2)$ ; there is no value for  $f(1)$ , which creates a break in the graph.



**3-109. See below:**

a.  $-15$

b.  $-4$

c.  $3$

d.  $-m^2$