

Lesson 10.1.2

10-13.

$$\frac{3x+2}{x+3} = 4 \text{ or } -\frac{3}{2}$$

10-15.

d. $\frac{(x-2)^2(y+5)}{3y(y+2)}$, $y \neq 0, -2$, or 2 e. $2x$, $x \neq 0$, and $y \neq 0$ f. $\frac{x+1}{2x-3}$, $x \neq \frac{3}{2}$ or 2

10-16.

a. $\frac{4}{x+1}$ b. $\frac{3}{x-2}$ c. $\frac{5(x-2)}{x+1}$ d. $\frac{2(2x-3)}{x+1}$ e. $\frac{5x+1}{x-2} = \frac{5x+1}{x-2}$

10-18.

a. $x-2=4$ b. For each $x=0$

10-19.

a. $m = -\frac{6}{5}$, $b = (0, -7)$ b. $m = \frac{3}{2}$, $b = (0, -5)$ c. $m = 2$, $b = (0, -12)$

10-20.

a. $(\frac{1}{3}, -2)$ b. $(4, 0)$ c. $(\frac{5}{2}, 7)$

10-22.

a. $m = -6$ b. $x = 5.5$

10-23.

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10-24.

$$\frac{2x}{3(2x-1)} = \frac{2x}{6x-2}$$

10-25.

a. She can multiply each term in the equation by a number to eliminate the denominators.
b. $2x^2 + 5x - 5 = 0$, $(2x+5)(x-1) = 0$, so $x = -\frac{5}{2}$ or 1 .

10-26.

a. $5x = 35$, $x = 7$ b. $3x = 12$, $x = 4$
c. $1 - x = 10$, $x = 0$ d. $4x^2 + 8x - 5 = 0$, $x = \frac{1}{2}$

10-27.

a. $x = \frac{15}{4} = 3\frac{3}{4}$ b. Multiply by 4: $4x - 15 = 96$, $4x = 111$, $x = \frac{111}{4} = 27\frac{3}{4}$
c. 24 or any multiple of 24, 24 is the least common multiple.
d. $x = 27\frac{3}{4}$

10-28.

Equations: $4x = 2 - 6x$, $1 - 2x = 5$, $5 - 3x = 7$, $2x + 1 = 5$, $x = 6$, $2 + 2x = 10$
 $4 - x = -1$; solutions are: -1 , 1 , 0 , $x = 2$, $x = 2$, $x = 2$, $x = 2$

10-30.

a. $\frac{5(3x-1)}{2(4x+1)}$ b. 1 c. $\frac{p+9}{3p-2}$ d. $\frac{4}{x-2}$

10-31.

$y = -\frac{1}{3}x^2 - 2$ 10-32. $y < \frac{2}{3}x^2 - 10$ 10-33. $y < 2x^2 + 4$ 10-34. $y < 2x^2 - 10$