

Unit 10
**Solving Formulas for a
 Single Variable**

Math Essentials

1

Warm-up

1. $5x - 6x = 3x$
2. $-3(x - 2) + x = 1 - x$
3. $\frac{7}{2}(x - 4) + \frac{x}{3} = 2x - \frac{7}{6}$

2

Practice 10.1

Distribute to simplify

1. $9(x - 5)$
2. $-3(a - 2b + 3c)$
3. $-(4 + 2x)$
4. $(-4w^2 - 3 + 5y^3)(-5)$

3

Practice 10.2

1. Solve for y .

$$14 = y + b$$

2. Solve for r .

$$r - s - 8 = P$$

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Practice 10.3

1. Solve for m .

$$mg = W$$

2. Solve for y .

$$K = 32yz$$

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What to do?

- Identify the variable to be isolated (circle/highlight it).
- Reverse everything to get that variable alone.

6

Practice 10.4

1. Solve for s.

$$-4 = -8r + 10s$$

2. Solve for b.

$$r = 3(b - a)$$

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Practice 10.5

Solve for C.

$$A = \frac{2}{9}(B - C)$$

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Practice 10.6

Solve for T.

$$A = \frac{7}{T}$$

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Multiply the LCD!!!

9

To get a variable out of the bottom of a fraction, MULTIPLY both sides by that denominator (the variable).

10

Practice 10.7

Solve for c.

$$a = \frac{b + 4}{c + d}$$

Multiply the LCD!!!

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Practice 10.8

Factor.

1. $5x - 20$
2. $12ab - 8b$

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Practice 10.9

Solve for m.

$$\frac{7}{m} = \frac{9}{n} + \frac{2}{p}$$

Multiply the
LCD!!!

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Practice 10.10

1. Solve for L. $2LW = V$
2. Solve for n. $-3 = 18m + 6n$
3. Solve for h. $(x - h)k = z$

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Practice 10.11

1. Solve for Z. $\frac{3}{4}(Y + Z) = X$
2. Solve for r. $\frac{L}{p(r+s)} = n$

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Practice 10.12

Solve for S.

$$\frac{S}{r_1} + \frac{S}{r_2} = 3$$

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**Multiply the
LCD!!!**
