

1.5 Rewriting Equations & Formulas Day 2

WARM-UP:

Review...

Solve the formula for the indicated variable.

8. Surface area of a cone: $S = \pi r^2 + \pi r l$; Solve for l

$$\frac{S - \pi r^2}{\pi r} = \frac{\pi r l}{\pi r}$$

$$l = \frac{S}{\pi r} - r$$

or

$$l = \frac{S - \pi r^2}{\pi r}$$

What about this?

Solve the literal equation $y = 3x + 5xz$ for x .

$$y = x(3 + 5z)$$

$$x = \frac{y}{3 + 5z}$$

Example 2

More Practice:

Solve the literal equation for x .

4. $y = 5x - 4x$

$$y = x$$

5. $2x + kx = m$

$$x(2+k) = m$$

$$x = \frac{m}{2+k}$$

6. $3 + 5x - kx = y$

$$5x - kx = y - 3$$

$$x(5-k) = \frac{y-3}{5-k}$$

$$x = \frac{y-3}{5-k}$$

1.5 Rewriting Equations & Formulas DAY TWO with work

Your Turn:

The formula for the surface area S of a rectangular prism is

$$S = 2lw + 2lh + 2wh. \quad \text{Solve the formula for the length } \underline{l}.$$

$$\begin{array}{r} S = 2lw + 2lh + 2wh \\ \underline{-2wh} \qquad \qquad \underline{-2wh} \\ S - 2wh = 2lw + 2lh \\ \underline{S - 2wh} = \underline{l(2w + 2h)} \\ \underline{2w + 2h} \qquad \underline{2w + 2h} \end{array}$$

$$l = \frac{S - 2wh}{2w + 2h}$$

Example 3

HW: pg. 40

A: 11, 17, 23 - 29 (o), 38, 47 - 54(o)

B: 7, 9, 15, 17, 23, 25, 27, 34, 47 - 54

C: 7, 9, 15, 17, 23, 25, 27, 34, 50, 52