

Section 3.7 Formulas and Functions

Formula A rule that describes the relationship of two or more variables. An equation stating the rule.

Examples

1. a. Solve $A = lw$ for w .

$$l = \frac{A}{w}$$

- b. Find the width of a rectangle that has an area of 42 square feet and a length of 6 feet.

$$l = \frac{42}{6} = 7 \text{ ft}$$

2. a. Solve $I = prt$ for t .

$$t = \frac{I}{pr}$$

- b. Find the number of years that \$2800 was invested to earn \$504 at 4.5% interest.

$$t = \frac{504}{2800(0.045)} = \frac{504}{126} = 4 \text{ year}$$

$r = .045$

A two-variable equation is in function form if one of its variables is isolated on one side of the equation.

3. Rewrite the following equations so that y is a function of x .

a. $-2x + y = 18$

$$y = 2x + 18$$

b. $4x + 2y = -10$

$$y = -2x - 5$$

c. $11y - 2 = 14x + 5$

$$y = \frac{14x}{11} + \frac{7}{11}$$

d. $-5x + 4y - 10 = 7x + 10$

$$y = 3x + 5$$