

## Literal Equations

Literal equations are also called formulas. They form a relationship between two or more variables, such as the formula to find the area of a circle from the radius  $A = \pi r^2$ .

Occasionally, we will need to solve for the variable that is not explicitly solved for in the equation, like trying to find  $r$  from the formula above.

To solve for a variable in a formula, treat the other variables as constants and solve as you normally would any other equation.

Ex. Solve  $A = 2L + 2W$  (area of a rectangle) for  $L$

$$A = 2L + 2W \quad \text{subtract } 2W \text{ from each side}$$

$$A - 2W = 2L \quad \text{divide both sides by } 2$$

$$(A - 2W)/2 = L \quad \text{given } A \text{ and } W \text{ can find } L$$

Solve  $C = 2\pi r$  for  $r$  (circumference of a circle)

$$C = 2\pi r \quad \text{divide both sides by } 2\pi \text{ (remember } \pi \text{ is just a number)}$$

$$C/2\pi = r \quad \text{can find } r \text{ given } C$$