

Applications: Formulas

In mathematics, a **formula** or **literal equation** is an equation involving two or more variables.

Consider the formula: $C = \frac{5}{9}(F - 32)$ for converting Fahrenheit temperature into Celsius.

Formulas express a **relationship** between the variables. If one knew the Celsius temperature and wanted to convert it to Fahrenheit, one could rewrite the formula in terms of F (or solve for F). The process of solving for a particular variable uses the **same steps** as one uses to solve linear equations.

Solve for F in: $C = \frac{5}{9}(F - 32)$

Solve for b in: $cb + d = \pi$

A common formula in finance problems is $A = P + PRT$. Solve for T .

If one is given a formula and all but one of the values for the variables in the formula, one can just replace the variables in the formula with the known values to find the one missing value. Consider the formula for finding the surface area of a right circular cylinder. $S = 2\pi r^2 + 2\pi rh$

Find h when $S = 210\pi$ and $r = 5$.