The formula for the surface area of a regular pyramid is $S = \frac{1}{2}P\ell + B$

S represents the surface area, ***P*** represents the perimeter of the base, ℓ represents the slant height, and ***B*** represents the area of the base of the pyramid.

a.) Solve the formula for ***P***.

$S = \frac{1}{2}P\ell + B$

$-B \quad -B$

$2 \cdot S - B = \frac{1}{2}P\ell \cdot 2$

$\frac{2(S-B)}{\ell} = \frac{P\ell}{\ell}$

$P = \frac{2S-2B}{\ell}$

OR

$P = \frac{2(S-B)}{\ell}$

b.) What is the perimeter of the base of a regular pyramid with a surface area of 137 square centimeters, a slant height of 11 centimeters, and a base with an area of 24.8 square centimeters?

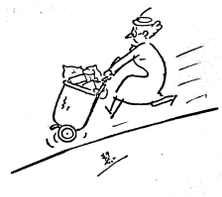
$P = \frac{2S-2B}{\ell} = \frac{2(137)-2(24.8)}{11} = \frac{224.4}{11}$

$P = 20.4$

The formula for potential energy is P = mgh where P is potential energy, m is mass, g is gravity, and h is height. Solve this equation for gravity.

$\frac{P}{mh} = \frac{mgh}{mh}$

$\frac{P}{mh} = g$



You are planning a visit to Canada for the weekend and check the weather to know what to pack. Their weather forecast is in Celsius but you need it in Fahrenheit. Solve the formula C = 5/9(F - 32) for F. If the forecast calls for a temperature of 18 degrees Celsius, what is that in Fahrenheit?

$9 \cdot \quad C = \frac{5}{9}(F - 32) \cdot 9$

$\frac{9C}{5} = \frac{5(F-32)}{5}$

$\frac{9C}{5} = F - 32$

$+32 \qquad +32$

$\frac{9C}{5} + 32 = F$

$F = \frac{9C}{5} + 32$

$F = \frac{9(18)}{5} + 32$

$F = \frac{162}{5} + 32$

$= 32.4 + 32$

$F = 64.4$