Method 2: The Distributive Property First:

"Going Fishing"

Isolate the variable *s*.

$4(s + 8) = 600$

$4s + 32 = 600$

$-32 \quad -32$

$\frac{4s}{4} = \frac{568}{4}$

$s = 142$

Let's do one more together…

$-4(x - 7) = 16$

$-4x + 28 = 16$

$-28 \quad -28$

$\frac{-4x}{-4} = \frac{-12}{-4}$

$x = +3$

Practice again but using the distributive property :

$-2(x - 3) = 12$

$-2x + 6 = 12$

$-6 \quad -6$

$\frac{-2x}{-2} = \frac{6}{-2}$

$x = -3$

$-20 = 5(3 + p)$

$-20 = 15 + 5x$

$-15 \quad -15$

$\frac{-35}{5} = \frac{5x}{5}$

$-7 = x$

The amount of food energy per day required by hikers is modelled by the equation $e = -123(t - 122)$, where e is the amount of food energy, in kilojoules (kJ) and t is the outside temperature in degrees Celsius.

a) If the outside temperature is -20°C, how much food energy is required per day?

b) If a hiker consumes 19 000kJ of food energy based on the outside temperature, what is the temperature ?

$e = -123(t - 122)$

$e = -123(-20 - 122)$

$e = -123(-142)$

$e = 17\,466$

The energy is 17 466 kJ.

b) $19000 = -123(t - 122)$

$19000 = -123t + 15006$

$-15006 \quad -15006$

$\frac{3994}{-123} = \frac{-123t}{-123}$

$-32°C = t$

The temperature is $-32°C$.