Example 1: A ship disappears over the horizon due to the
curvature of the earth. The higher you are above the
earth, the farther away the horizon appears. The
relationship between how high you are and how far you
can see is given by the formula

$$d = 2\sqrt{3.2h}$$

Where h is your height in metres, above the
ground and d is the distance in kilometres to the
horizon.

a) How far can you see from the CN Tower's 360degree
Restaurant (351m above the ground)?

b) How high would you have to go for the horizon to appear to
be 100 km away?

Example 2: Rearrange the following equations for the indicated variable:

a) Given the equation d = a + b , express a in terms of b and d

b) Rearrange C = 2πr to isolate r

Rearranging an equation with more than one step.

Example 3: The equation of a line relates y to x, m
       and b: y = mx + b. Rearrange this equation
       to express x in terms of y, m and b.

** Note we'll talk more about the
significance of m and b in this
equation in a later chapter!!!

Steps:
1. Isolate the variable term
2. Isolate the variable

Example 4: The kinetic energy of an object
depends on its mass and how it is moving and can
be modelled by the formula

$$E = \frac{1}{2}mv^2$$

Where :
E is the kinetic energy (in joules)
m is the mass (in kilograms)
v is the speed (in metres per second)

If the mass of an object is 25 kilograms and it
has a kinetic energy of 125 joules, what is the
object's velocity?