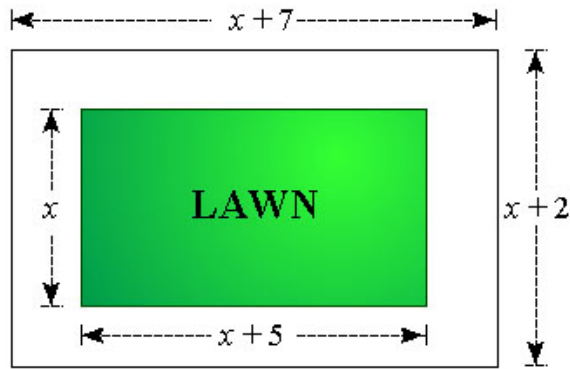


Lawn algebra

This task is about expanding and simplifying algebraic expressions.



Awhina has a path around her lawn as shown in the diagram above. All measurements are given in metres.

The area of the lawn can be written as $x(x + 5)$.

Expand $x(x + 5)$

a)

The area of the path and the lawn **combined** can be written as $(x + 2)(x + 7)$.

Expand and simplify $(x + 2)(x + 7)$

b)

If the lawn was made 3 metres longer and 3 metres wider, the area of the path can be written as:

$$(x + 5)(x + 10) - (x + 3)(x + 8)$$

Expand and simplify $(x + 5)(x + 10) - (x + 3)(x + 8)$.

c)
