

Lesson 1: Let's Think

The formulae for the perimeter of a rectangle is $p = 2l + 2w$, where p is the perimeter, l is the length and w is the width.

For example, a rectangle that has a length of 3m and a width of 2m has a perimeter of 10m as $2 \times 3 + 2 \times 2 = 10$.

Farmer McDonald's chicken enclosure is a rectangle and it has a perimeter of 30m. Each side is a whole number of meters.

What are all the possible combinations of length and width for the chicken enclosure?

You might want to use a table like this to help you record your answers:-

| Length | Width |
|--------|-------|
| | |
| | |

Lesson 1: Let's Apply

Mia has written the equation:

$$5a = 60 - y$$

a and y are both whole numbers above 0.

Mia says there are 8 possible sets of values for a and y .

Is Mia correct? How do you know?

Lesson 2: Let's Think

Mia visits a friend's house. Her friend has some chickens and rabbits.

Chickens have 2 legs. Rabbits have 4 legs.

Mia knows that between them all of the animals at her friend's house have 30 legs.

Can you create a formula that would help Mia find all the different possibilities for the numbers of chickens and rabbits that her friend has?

Can you use the formula to find all the different combinations of the number of chickens and rabbits that her friend has?

Lesson 2: Let's Apply

**Tables at High View Primary sit either 6 or 4 children.
There are 30 children in Class 6.**

**The teacher needs to decide how many of each table to use.
Can you represent this relationship using a formula?**

What different combinations of 6- and 4-seater tables could the teacher use to seat all children without any left over?

The teacher does not need to use both types of table.