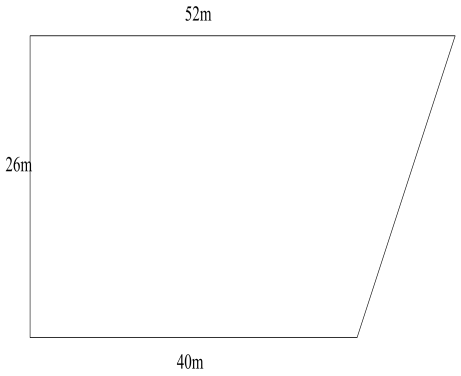
Introductory tasks

The block of land for the garden (showing its dimensions) is drawn below:



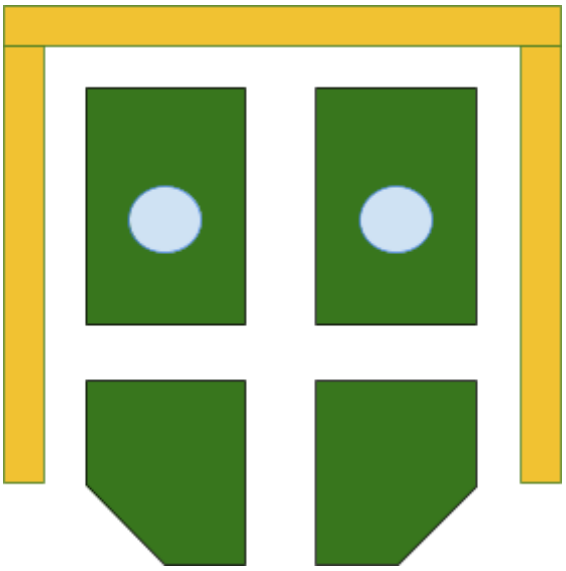
What is the area of the block of land?
What is the perimeter of the block of land?

You may need Pythagoras Theorem

$$a^2 + b^2 = c^2$$

Main Task:

My Garden Rules



You have been asked to design a garden in the grounds of a country estate.

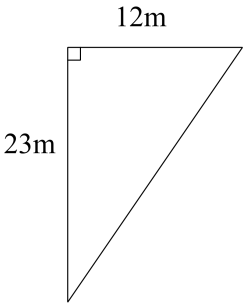
Design your garden based on the following criteria:

- the main part of the garden should be a grassed lawn
- the owner would like a formal look with all sides of the lawn section being square (ie. right angles)
- a 1.5m wide path is required around the edge of the lawn
- the garden must contain a circular water feature surrounded by the lawn
- the garden block must have a hedge planted along three of its borders for privacy

Draw a diagram of your garden design, marking on it all required measurements.

Calculate the area of the turfed lawn.
Calculate the area of the water feature.
Calculate the area of the path.
Calculate the length of the hedge.

Enabling prompts: listed in order of difficulty

You are designing a garden on a rectangular block with dimensions 20m by 25m. What is the area of the block of land? What is the perimeter of the block of land?
Calculate the area of this triangle. Use pythagoras theorem to calculate the length of the unknown side in this triangle.   

Extending prompts: listed in order of difficulty

If turf costs $8.00 per square metre, how much will it cost to lay the lawn?
200mm high Murraya plants for the hedge cost $16.00 each and should be planted 1 metre apart. How many hedge plants are needed and how much will they cost?
The owner has selected 300x300x40mm pavers for the path. The pavers are $3.50 each, and the cost of laying the pavers is $65 per square metre. How much will it cost to pave the path?