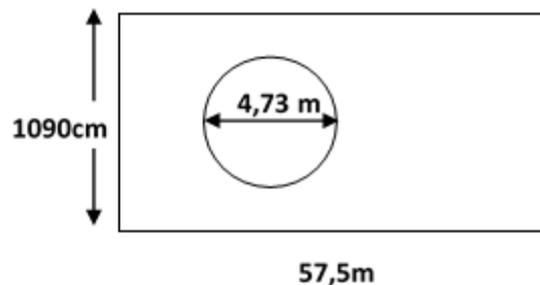


QUESTION 1

The picture below shows a farmer's garden ABCD with a circular pond. The diameter of the pond is 4,73m. There is grass around the circular pond. The dimensions of the garden are shown in the diagram below



1.1 Calculate the CIRCUMFERENCE of the circular pond (2)

1.2 Calculate the area of the circular pond (2)

1.3 Calculate the area of the rectangle farm (2)

1.4 If farmer wants to cover his farm with grass around circular pond, what is the total area of grass he needs to cover (2)

1.5 If he pays R 19.50 for each m^2 of grass, what is the total cost? (2)

QUESTION 2

There is a fish tank with the following dimensions (6)

Height: 55 cm

Length: 46 cm

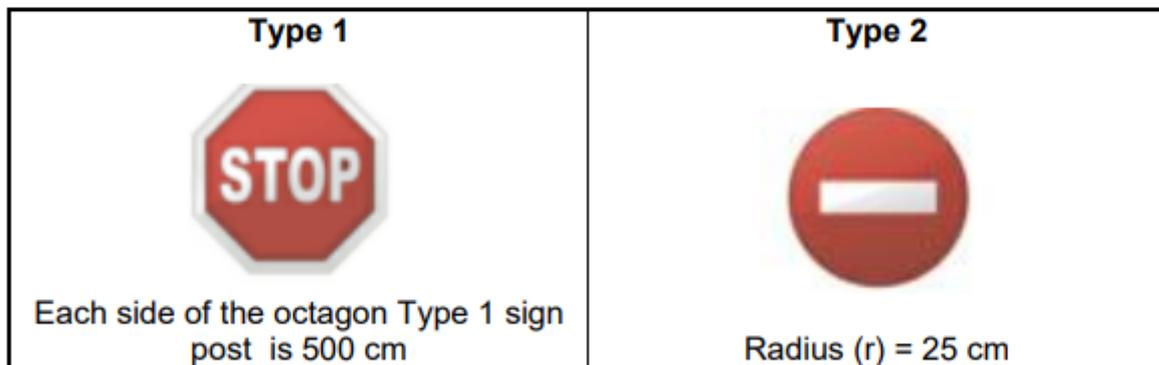
Width: 22.5 cm

- 2.1 Calculate the volume of the tank (2)
- 2.2 If you decrease the height by 5 cm, what is the new volume? (2)
- 2.3 Calculate the difference in the volume of old and new volumes (2)

QUESTION 3

ABC Company won a tender to supply road sign posts of Type 1 and Type 2 shown in the pictures below.

Use the pictures to answer the questions that follow.



- 3.1 Calculate the perimeter of the Type 1 sign post in metres. (3)
- 3.2 Calculate the area of sign post Type 2 in cm^2 .
- You may use the formula: **Area of a circle: $A = \pi r^2$ and $\pi = 3,142$.** (2)
- 3.3 Determine the area of the enclosed rectangle given that its area is of $\frac{1}{5}$ th the area of the sign post Type 2. (2)

QUESTION 4

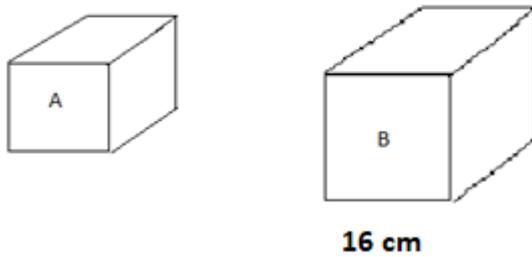
I have a garden in a circle shape. The diameter of the garden is 12 m.

- 4.1 Calculate the perimeter of the garden (2)
- 4.2 Calculate the area of the garden (2)
- 4.3 I want to close my garden with cement. Cost of the cement to cover each m^2 is R 12.50. What is the total cost of cement? (2)

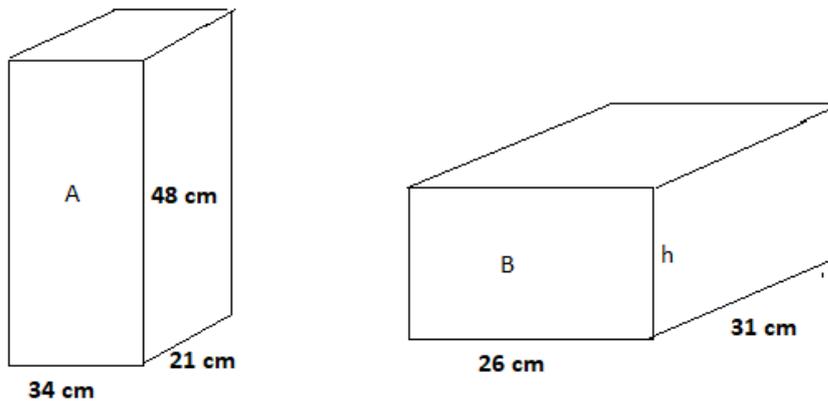
4.4 I want to construct a wall around my garden with cement. Cost of the cement to construct each m is R 39.90. What is the total cost of cement? (2)

QUESTION 5

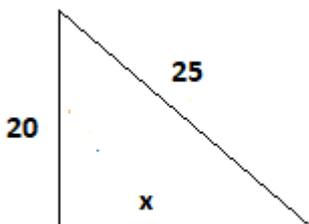
5.1 Shape B has double the surface area of A. Determine the one length of one side of A (4 MARKS)



5.2 The surface area of shapes A and B are identical. Calculate h for shape B (5 MARKS)



5.3 Calculate the length of the x for the shape (right-angled triangle) given below (2)



QUESTION 6

A farmer uses centre pivot irrigation system for his farm. The system contains horizontal water pipe with one end fixed at the centre of a circular field. When the pipe moves in a circle the fixed point or pivot, sprayers along the pipe spray water on the crops.

6.1 Determine the RADIUS of the water pipe needed if $11311,2 \text{ m}^2$ must be watered? (3)

6.2 Determine the LENGTH of the water pipe? (1)

6.3 What distance does the outermost sprayer cover during one revolution of the water pipe? (2)

6.4 What distance does the sprayer in the middle of the water pipe cover during one revolution? (2)

