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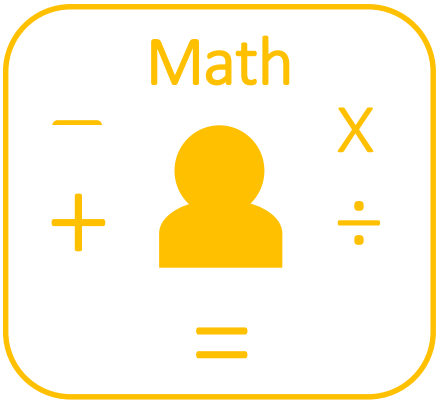
TUTORS

Preparation for

High School Mathematics

Measurement II



Instructions and Tips:

- ✓ **You have 60 minutes to complete this worksheet**
- ✓ **This worksheet consists of 5 questions**
- ✓ **Write answers in the spaces provided**
- ✓ **All working must be clearly shown**

Student Name: _____

Student ID: _____

Date: _ _ / _ _ / _ _ _ _

Total Score:

Highest Score:

Tutor's Comments:

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Question 1

Use π = 3.14

(a) Consider a rectangular room with a length of 20 m and a width of 10 m. Calculate the area of carpet that needs to be purchased to carpet the room.

(2 marks)

(b) Calculate the radius of a sphere that has a volume of 1000 m^3.

(2 marks)

(c) Calculate the surface area of a sphere that has a volume of 1000 m^3.

(2 marks)

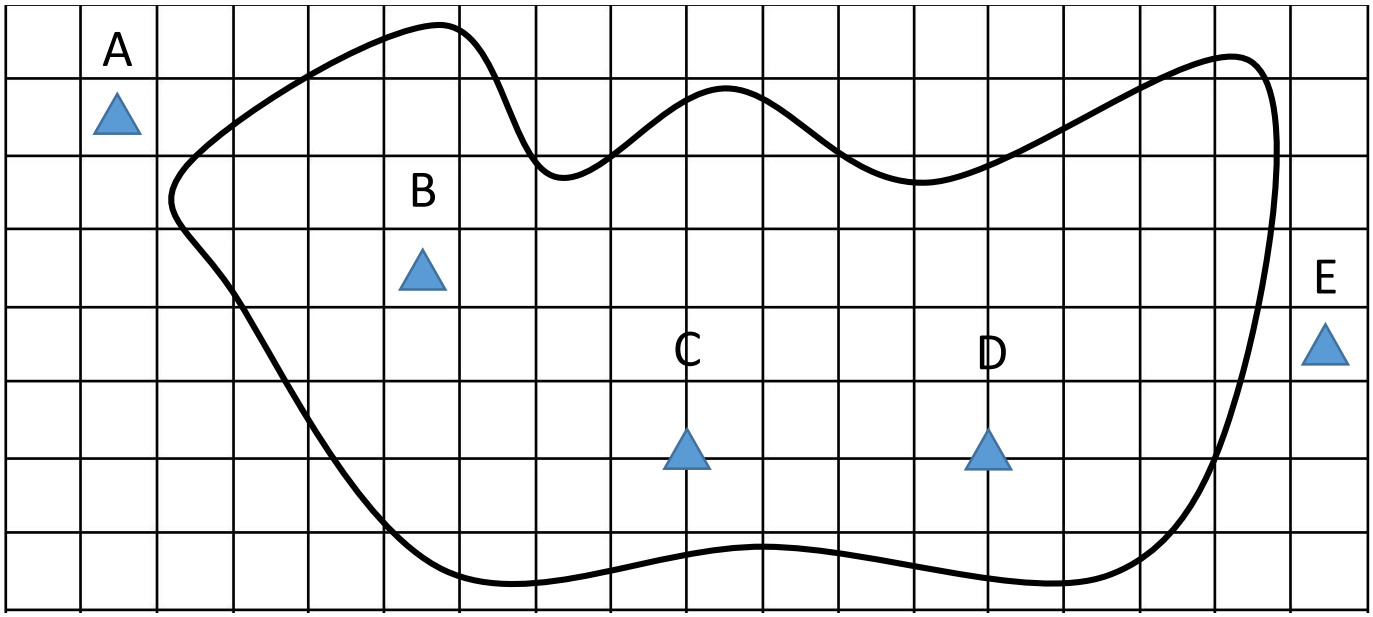
(d) Calculate the volume of a pyramid that has a base area of 20 m^2 and a height of 5 m.

(2 marks)

Question 2

Consider the island below. The map is drawn on a grid of 1 cm squares. A, B, C, D and E are five high producing oil facilities.

The scale of the map is 1:2500



(a) Determine, in centimetres, the distance from C to D on the map.

(1 mark)

(b) Estimate, by counting, the area in square centimetres of the island.

(2 marks)

(c) Use the scale to Calculate the ACTUAL distance between C and D in kilometres on the map.

(2 marks)

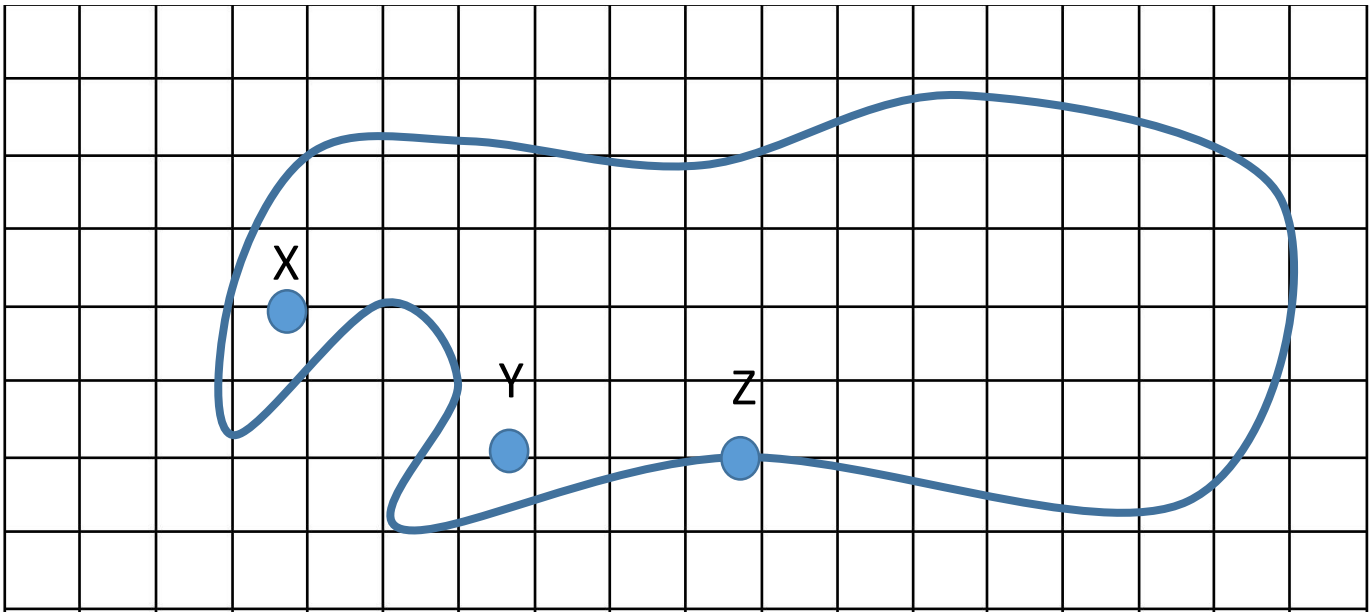
(d) Calculate, the ACTUAL area, in square metres, of the island.

(3 marks)

Question 3

Consider the island below. The map is drawn on a grid of 1 cm squares. X, Y and Z are three all-inclusive tourist resorts.

The scale of the map is 1:1500



(a) Determine, in centimetres, the distance from Y to Z on the map.

(1 mark)

(b) Estimate, by counting, the area, in square centimetres, of the island.

(2 marks)

(c) Use the scale to calculate the ACTUAL distance in kilometres between Y and Z on the map.

(3 marks)

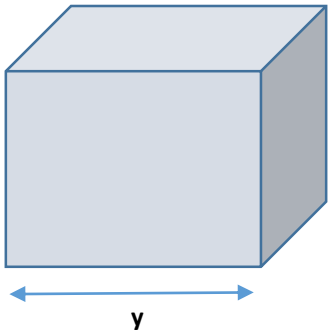
(d) Calculate, the ACTUAL area in square metres of the island.

(3 marks)

Question 4

Consider the cube below. The cube has a volume of 100 m^3.

(Diagram not drawn to scale)



(a) Calculate the length of one side of the cube.

(2 marks)

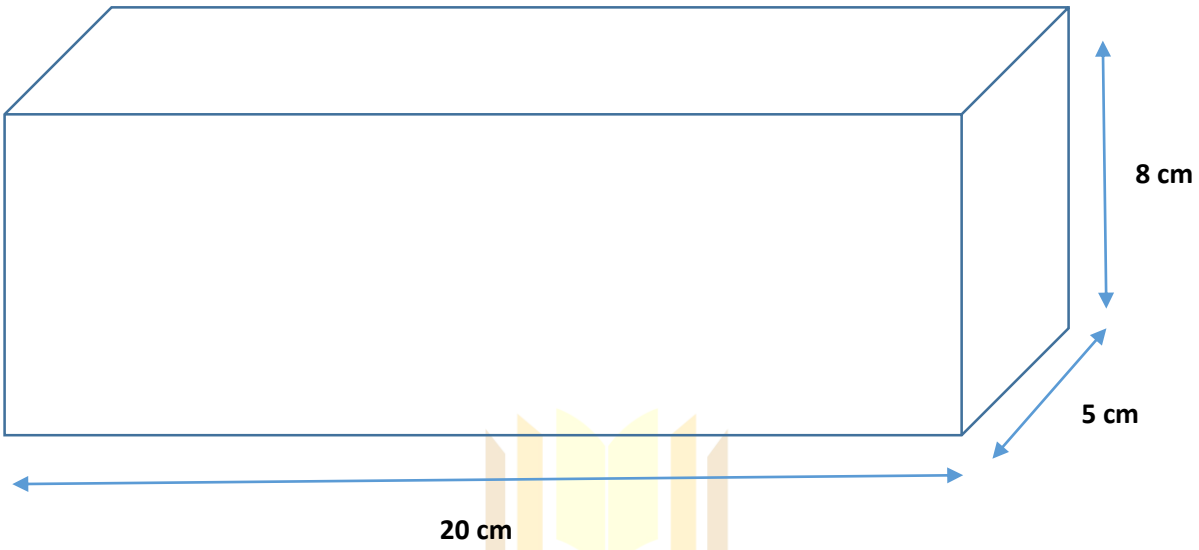
(b) Calculate the surface area of the cube.

(2 marks)

Question 5

Consider the dimensions of the cuboid shown:

(Diagram not drawn to scale)



(a) Calculate the volume of the cuboid shown.

(2 marks)

(b) Calculate the surface area of the cuboid shown.

(2 marks)

END OF WORKSHEET

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