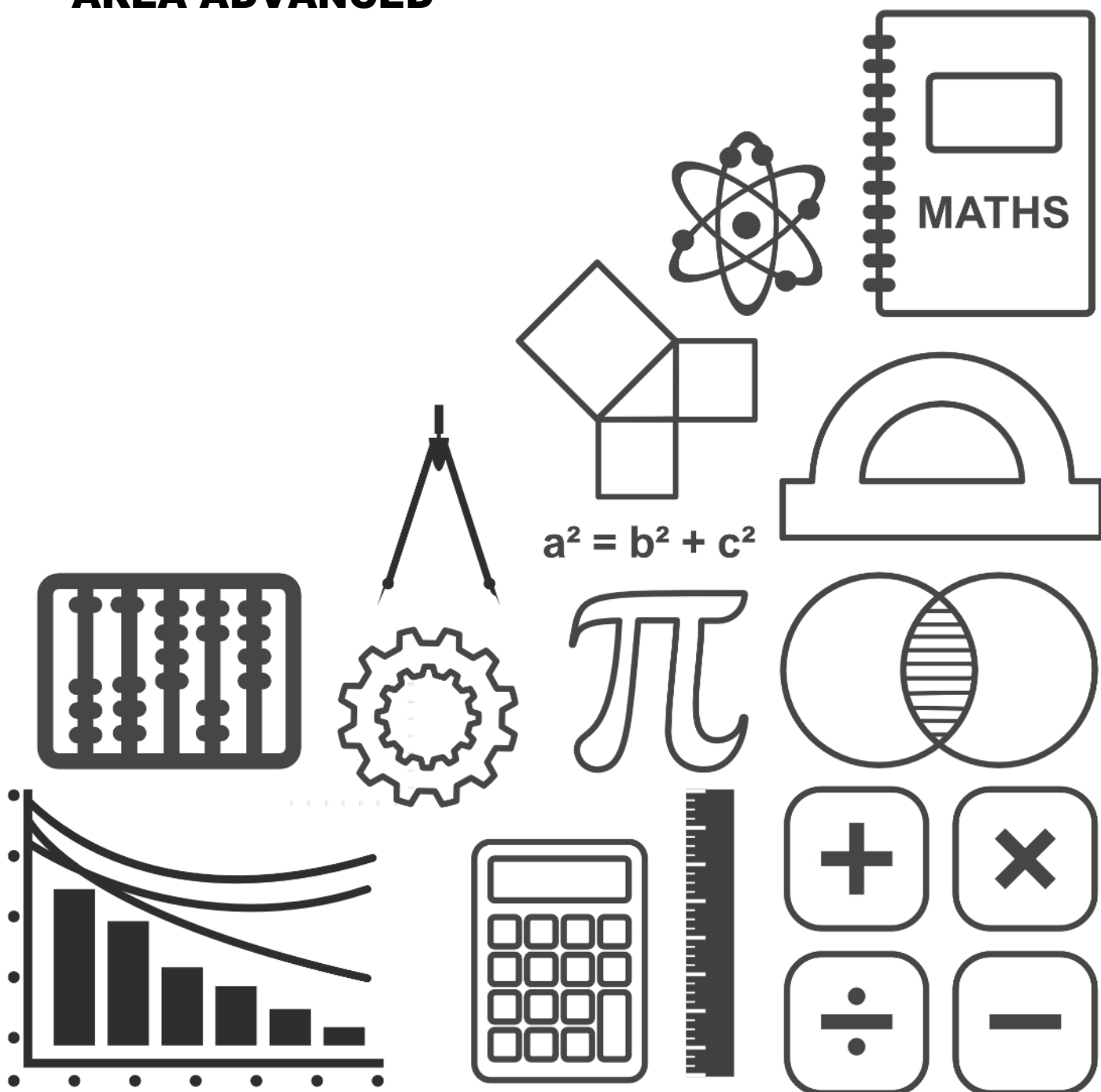
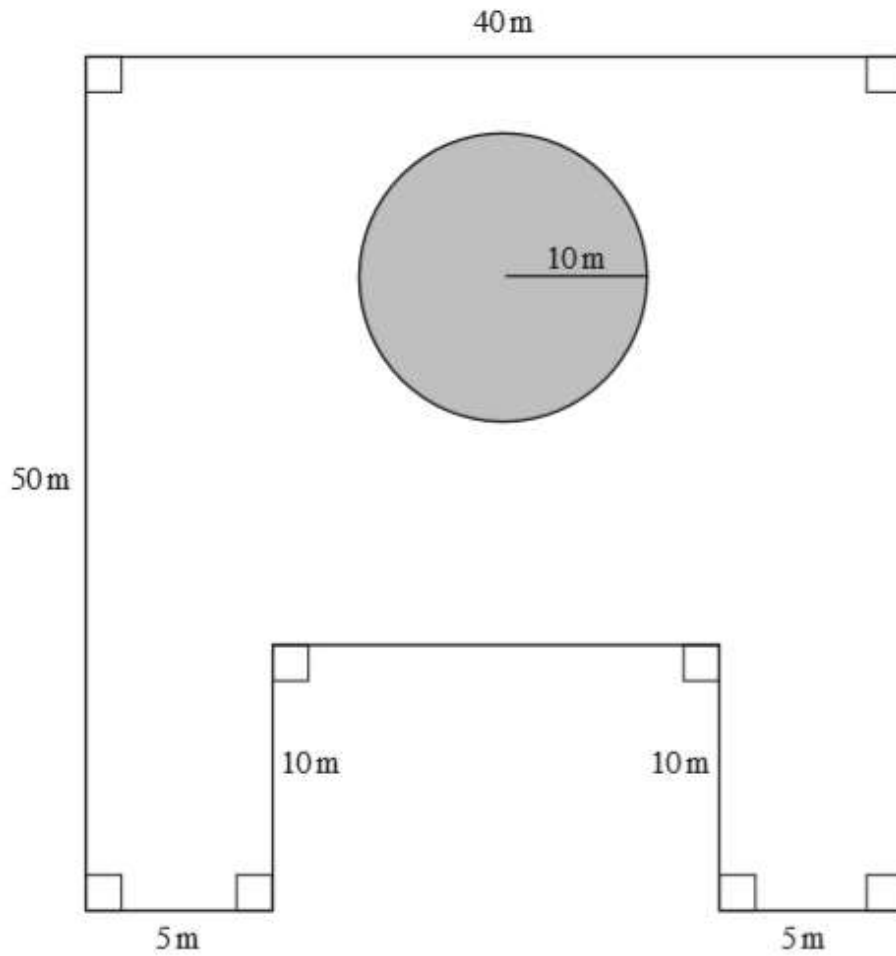


MATHSDIY

GCSE TOPIC BOOKLET AREA ADVANCED



1. The following diagram shows a paved area with a circular pond of radius 10 m.



Using the value of π as 3.14, calculate the area of the paved surface clearly indicating the units of your answer.

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[6]

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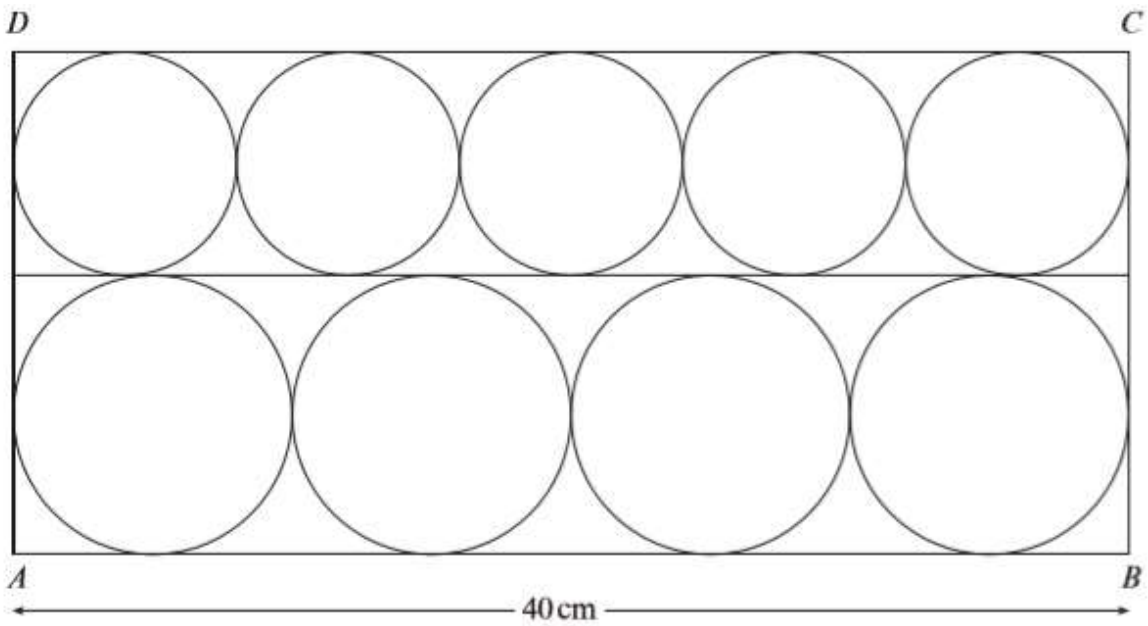


Diagram not drawn to scale.

The diagram shows a set of five identical circles and a set of four other identical circles fitting exactly into the rectangle $ABCD$.
 The length of AB is 40 cm.
 Calculate the area of the rectangle $ABCD$.

[5]

3. The following diagram shows a card in the shape of a trapezium, with a circular hole of radius 10 cm cut out of the card.
 The lengths of the parallel sides of the trapezium are 55 cm and 45 cm and the perpendicular distance between the parallel sides is 30 cm.

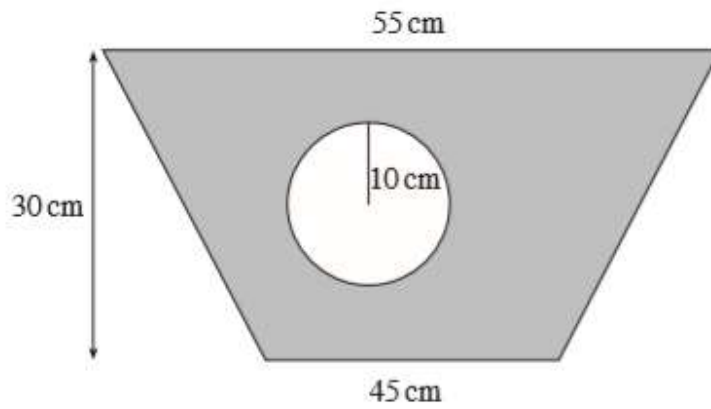


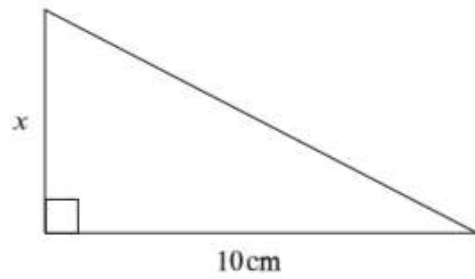
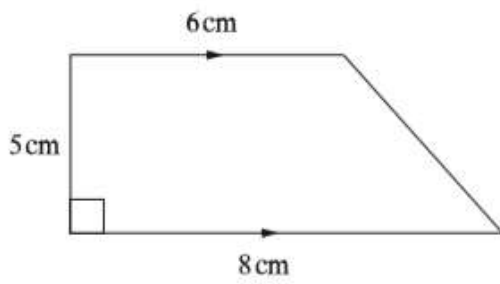
Diagram not drawn to scale.

calculate

the area of the shaded part of the card.

[5]

4. (a) The triangle and trapezium below both have the same area.



Diagrams not drawn to scale

Calculate the length of the side marked x .

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[4]

Two friends, Kim and Terry, are planning a camping holiday.

- (a) The floor of their tent can be thought of as a rectangle. The tent has a ground area of 5.12 m^2 .

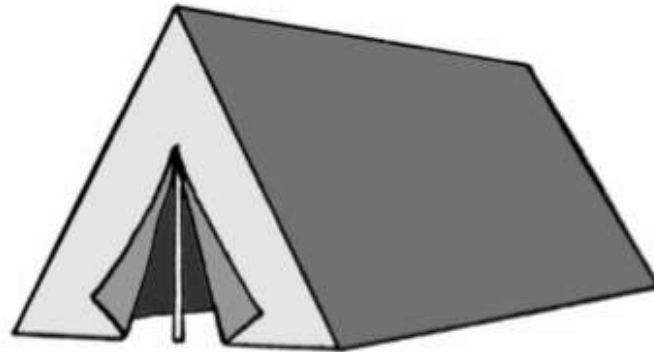


Diagram not drawn to scale

The length of the tent is twice as long as the width.
Calculate the length and width of the floor of the tent.

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Length metres

Width metres

[4]

6. The diagram shows a square drawn inside a circle.

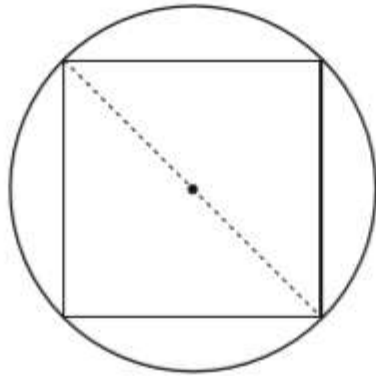


Diagram not drawn to scale.

The diameter of the circle is 40 cm.
Find the area of the square.

[4]

7.

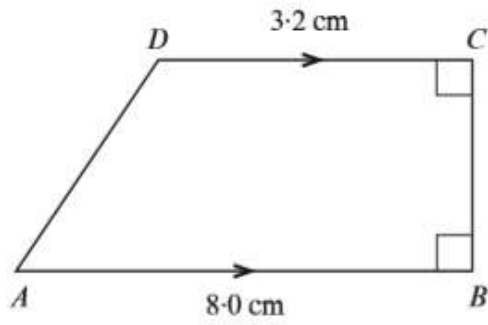


Diagram not drawn to scale

Given that the area of the trapezium $ABCD$ is 30.8 cm^2 , find the length of AD .

[7]