MATHEMATIC A

TOPIC- Mensuration

2D shapes

8

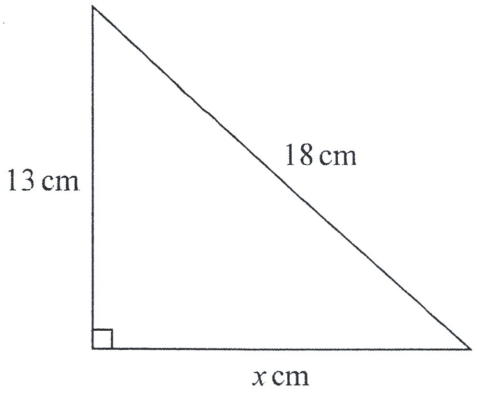


Diagram **NOT** accurately drawn

Work out the value of x.
Give your answer correct to 3 significant figures.

.....

(Total for Question 8 is 3 marks)

10 Here is an isosceles triangle.

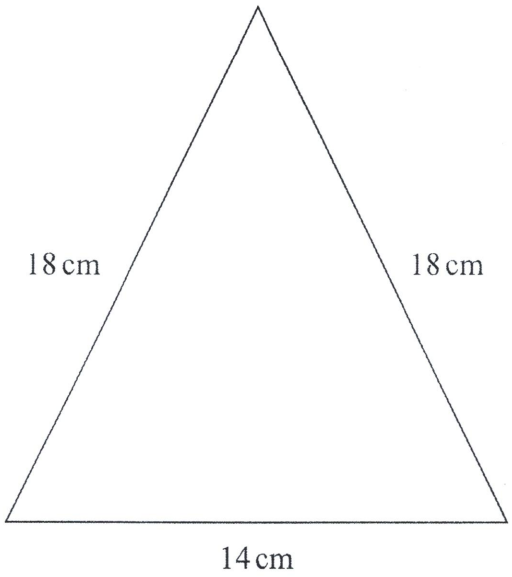


Diagram **NOT** accurately drawn

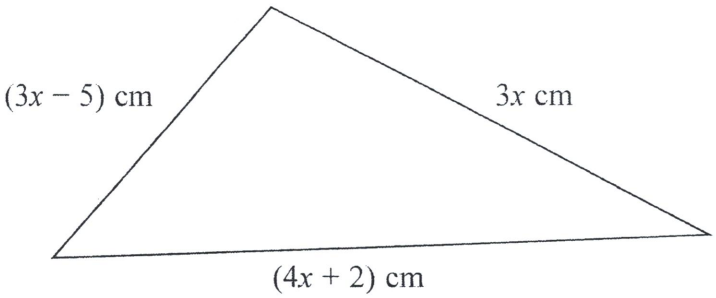
Work out the area of the triangle.
Give your answer correct to 3 significant figures.

..... cm^2

(Total for Question 10 is 4 marks)

8 The diagram shows a triangle.

Diagram **NOT** accurately drawn



The lengths of the sides of the triangle are $3x$ cm, $(3x - 5)$ cm and $(4x + 2)$ cm.

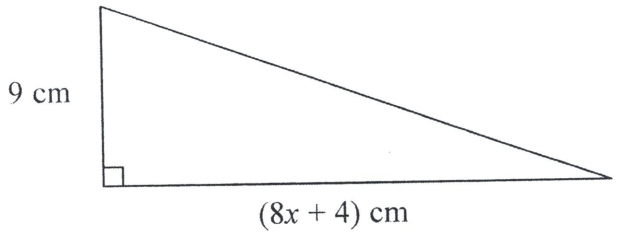
The perimeter of the triangle is 62 cm.

Work out the value of x.
Show clear algebraic working.

$x =$ .....

(Total for Question 8 is 4 marks)

11 The diagram shows a right-angled triangle and a rectangle.



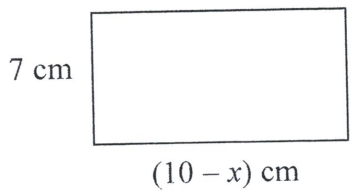


Diagram **NOT** accurately drawn

The area of the triangle is twice the area of the rectangle.

(i) Write down an equation for x.

.....

(ii) Find the area of the rectangle.
Show clear algebraic working.

..... cm^2

(Total for Question 11 is 7 marks)

15 Here is a trapezium.

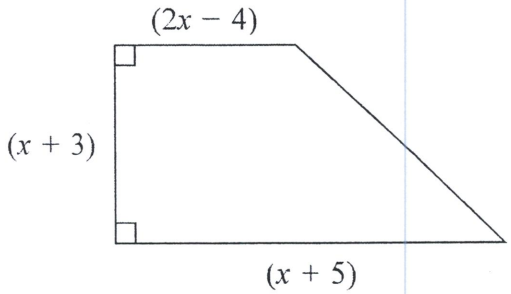


Diagram **NOT** accurately drawn

All measurements are in centimetres.

The area of the trapezium is 60 cm^2

(a) Show that $3x^2 + 10x - 117 = 0$

(3)

(b) Work out the value of x
Show your working clearly.
Give your answer correct to 3 significant figures.

.....

(3)

(Total for Question 15 is 6 marks)

17 The diagram shows a trapezium.

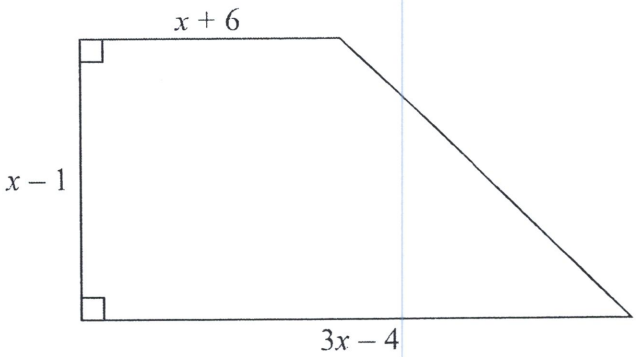


Diagram **NOT** accurately drawn

All measurements on the diagram are in centimetres.

The area of the trapezium is 119 cm^2

(i) Show that $2x^2 - x - 120 = 0$

(ii) Find the value of x.
Show your working clearly.

$x =$ .....

(Total for Question 17 is 6 marks)

17

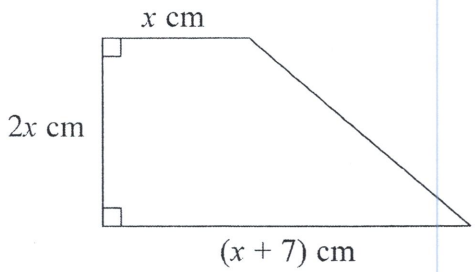


Diagram **NOT** accurately drawn

The diagram shows a trapezium.
The trapezium has an area of 17 cm^2

(a) Show that $2x^2 + 7x - 17 = 0$

(3)

(b) Work out the value of x.
Give your answer correct to 3 significant figures.
Show your working clearly.

$x =$ .....

(3)

(Total for Question 17 is 6 marks)

8 The diagram shows a parallelogram $ABCD$.

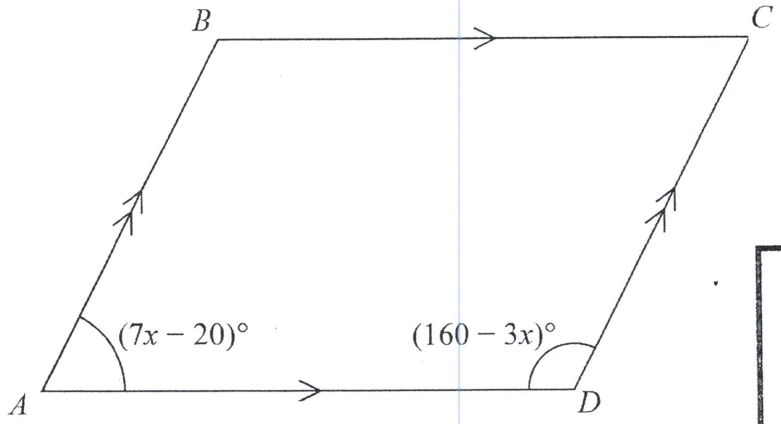


Diagram **NOT** accurately drawn

Angle $BAD = (7x - 20)°$
Angle $ADC = (160 - 3x)°$

Work out the value of x.
Show clear algebraic working.

$x =$ .....

(Total for Question 8 is 3 marks)

21 *LMNP* is a quadrilateral.

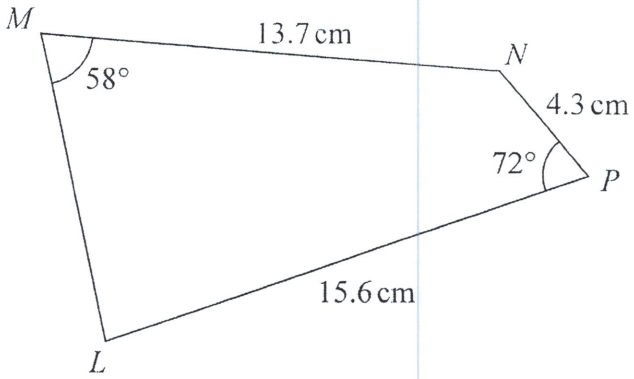


Diagram **NOT** accurately drawn

Work out the size of angle *MLP*.
Give your answer correct to 3 significant figures.

°

(Total for Question 21 is 6 marks)

19 *ABCD* is a kite.

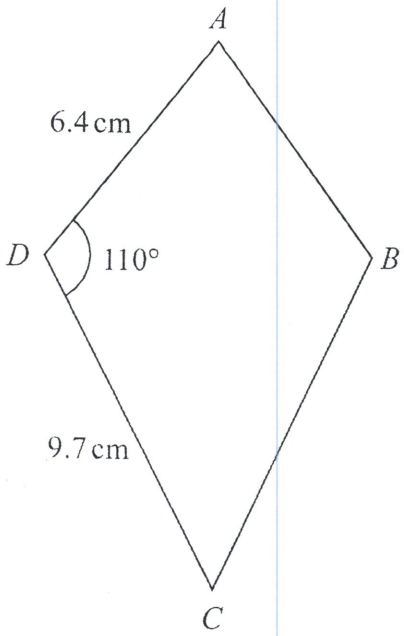


Diagram **NOT** accurately drawn

Work out the area of the kite.
Give your answer correct to 3 significant figures.

..... cm^2

(Total for Question 19 is 3 marks)

14

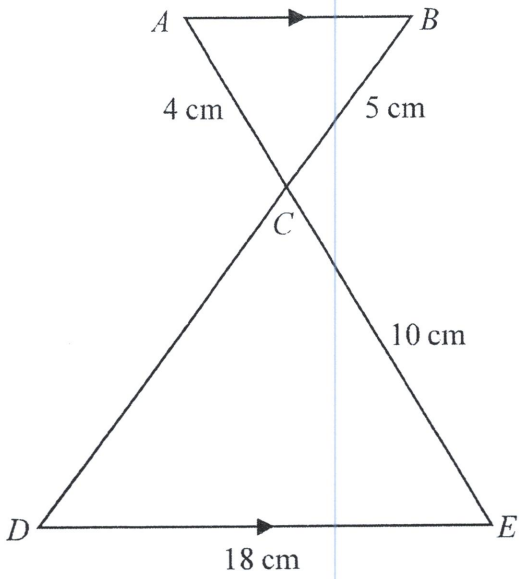


Diagram **NOT** accurately drawn

ACE and *BCD* are straight lines.
AB is parallel to *DE*.

(a) Calculate the length of *CD*.

.....cm

(2)

(b) Calculate the length of *AB*.

.....cm

(2)

The area of triangle $ABC = T$ cm^2

(c) Find the area of triangle *CDE* in terms of *T*.

..... cm^2

(1)

(Total for Question 14 is 5 marks)