Area of Triangles using Heron's Formula

ANSWERS

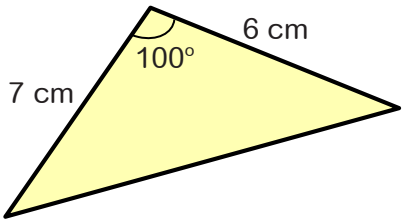
Give answers to 3 significant figures.

NOT TO SCALE

Section A

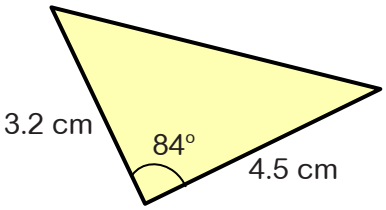
Questions 1 - 5 find the area of the triangles.
Question 6 find the missing side x.

1)



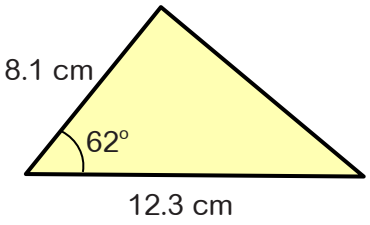
Area = 20.7 cm²

2)



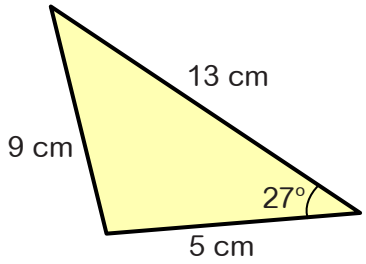
Area = 7.16 cm²

3)



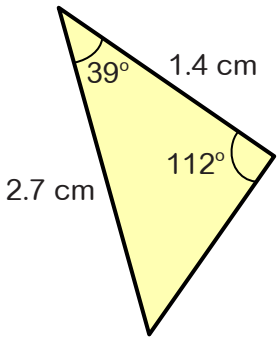
Area = 44.0 cm²

4)



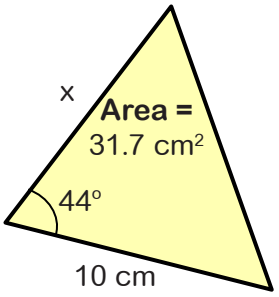
Area = 14.8 cm²

5)



Area = 1.19 cm²

6)

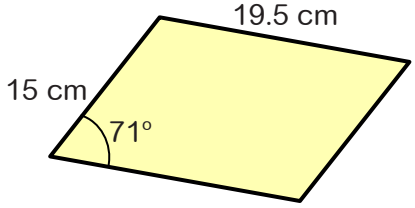


x = 9.13 cm

Section B

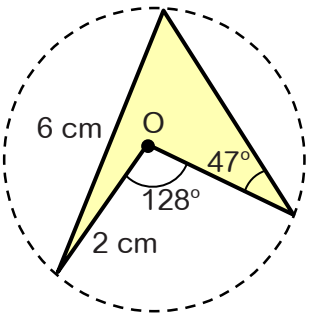
Calculate the area of the parallelogram, arrow-head and irregular quadrilateral.

1)



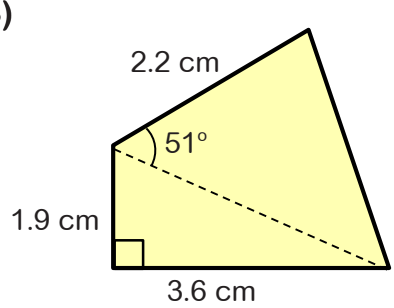
Area = 277 cm²

2)



Area = 3.11 cm²

3)



Area = 6.90 cm²

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ANSWERS

Section C

1) A regular hexagon has sides lengths 10 cm.
Calculate the area of the hexagon.

260 cm^2

2) The area of triangle ABC is 19.6 cm^2.
AB = 5.9 cm, AC = 8.7 cm.
Calculate the two possible sizes of angle A.

49.79°, 130.21°

Extension

The points X, Y and Z are are on the circumference of a circle, with center O and radius 5 cm.
XY = 7 cm and YZ = 4.5 cm.
Calculate the area of quadrilateral OXYZ.

22.5 cm^2