REVIEW

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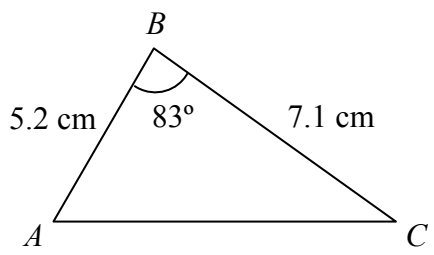
AREA OF A TRIANGLE

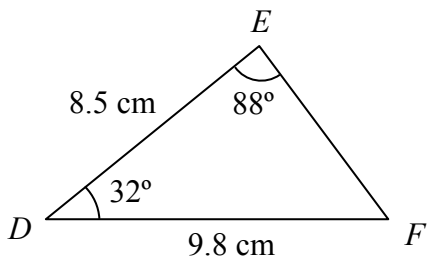
USING THE SINE OF AN ANGLE

Ref: G456.2R1

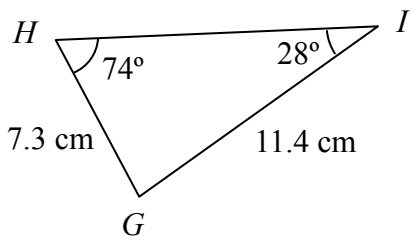
A1 Find the area of triangle *ABC*



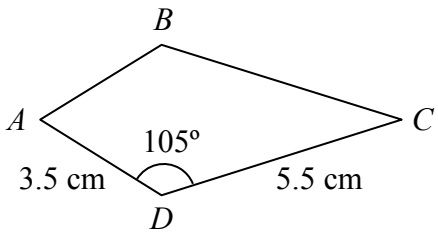
A2 Find the area of triangle *DEF*



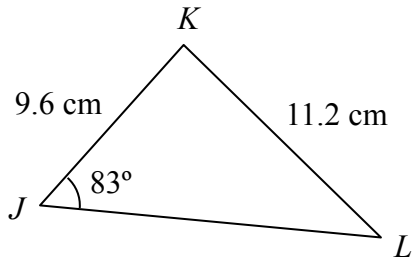
A3 Find the area of triangle *GHI*



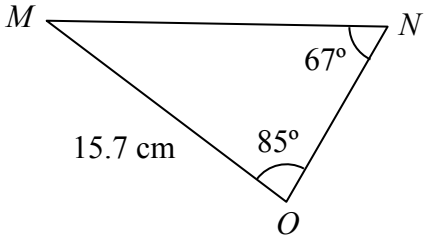
A4 Find the area of the kite



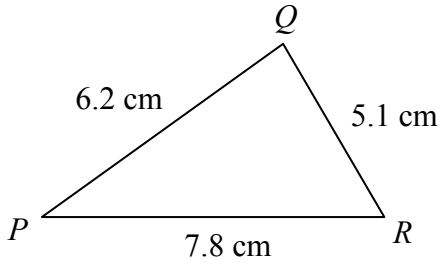
B1 Find the area of triangle *JKL*



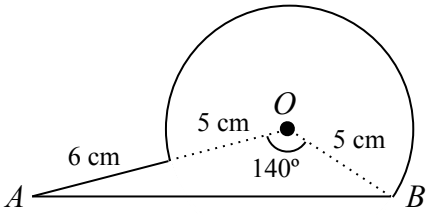
B2 Find the area of triangle *MNO*



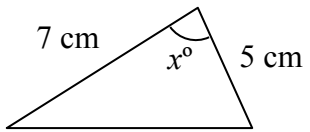
B3 Find the area of triangle *PQR*



B4 Find the area of the shape

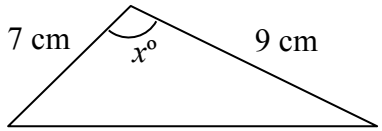


C1 The area of the triangle is 16.5 cm^2.



The angle $x°$ is **acute**.
Find the value of x.

C2 The area of the triangle is 20 cm^2.



The angle $x°$ is **obtuse**.
Find the value of x.

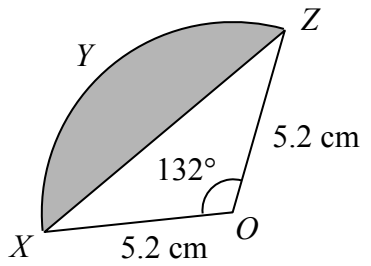
C3

ABC is a triangle.
AB = 11 cm
AC = 7 cm

The area of triangle *ABC* is 32 cm^2

Find, in degrees, the **two** possible sizes of angle *BAC*.

C4 Find the **shaded** area



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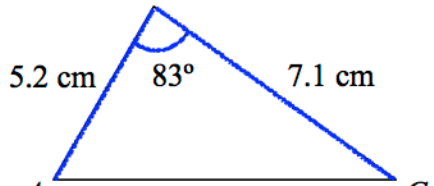
Ref: G456.2R1

A1

$A = \frac{1}{2} \times 5.2 \times 7.1 \times \sin 83°$

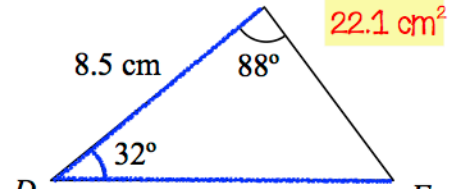


18.3 cm²

A2

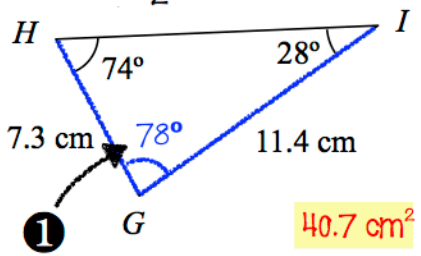
$A = \frac{1}{2} \times 8.5 \times 9.8 \times \sin 32°$

22.1 cm²



A3

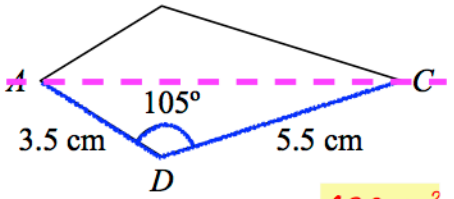
❷ $A = \frac{1}{2} \times 7.3 \times 11.4 \times \sin 78°$



40.7 cm²

A4

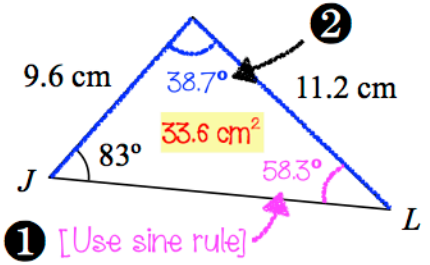
$A = 2 \times \left[\frac{1}{2} \times 3.5 \times 5.5 \times \sin 105° \right]$



18.6 cm²

B1

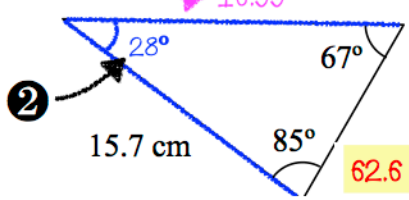
❸ $A = \frac{1}{2} \times 9.6 \times 11.2 \times \sin 38.7°$



B2

❶ [Use sine rule]

16.99

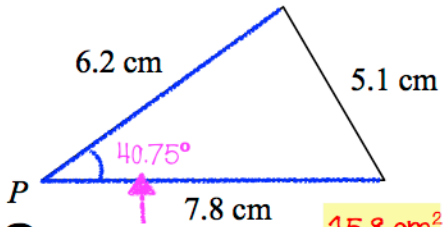


62.6 cm²

❸ $A = \frac{1}{2} \times 15.7 \times 16.99 \times \sin 28°$

B3

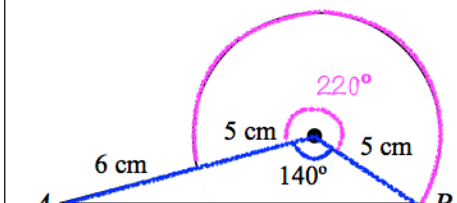
❷ $A = \frac{1}{2} \times 6.2 \times 7.8 \times \sin 40.75°$



15.8 cm²

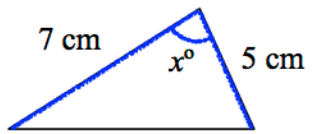
B4

$\frac{220}{360} \times \pi \times 5^2 + \frac{1}{2} \times 11 \times 5 \times \sin 140°$



65.7 cm²

C1

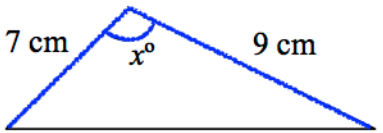


$\frac{1}{2} \times 7 \times 5 \times \sin x° = 16.5$

$\sin x° = \frac{16.5 \times 2}{7 \times 5}$

$x = 70.5°$

C2

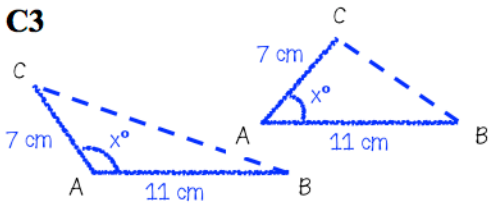


$\frac{1}{2} \times 7 \times 9 \times \sin x° = 20$

$\sin x° = \frac{20 \times 2}{7 \times 9}$

$x = 140.6°$

C3

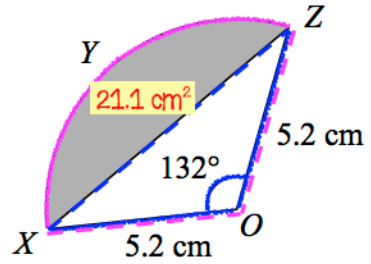


$\frac{1}{2} \times 11 \times 7 \times \sin x° = 32$

$\sin x° = \frac{32 \times 2}{11 \times 7}$

$x = 56.2°$ and $123.8°$

C4



$\frac{132}{360} \times \pi \times 5.2^2 - \frac{1}{2} \times 5.2^2 \times \sin 132°$