

National 5 Mathematics:
Pythagoras, Circles & Polygons Worksheet

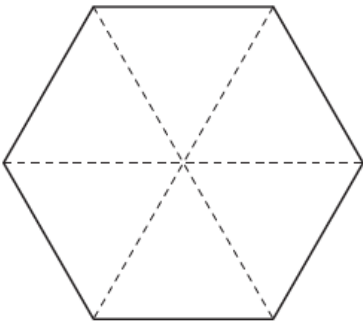
Please attempt the following questions in preparation for the online session on 25th January.

Q1

Calculate the size of an interior angle in a dodecagon.

Q2

The table top is in the shape of a regular hexagon.
The 3 diagonals of the hexagon are each 40cm long.



Calculate the area of the table top.

Q3

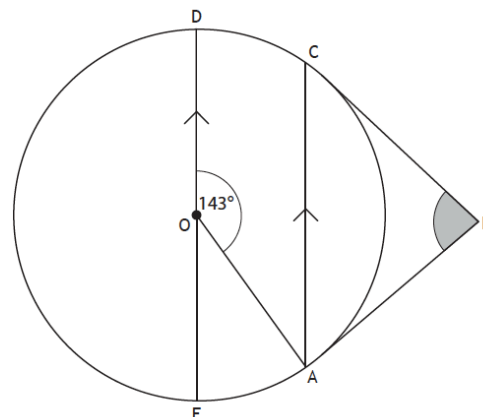
The diagram shows a circle centre O.

AB and BC are tangents to the circle.

AC and ED are parallel.

Angle AOD is 143° .

Calculate the size of angle ABC.

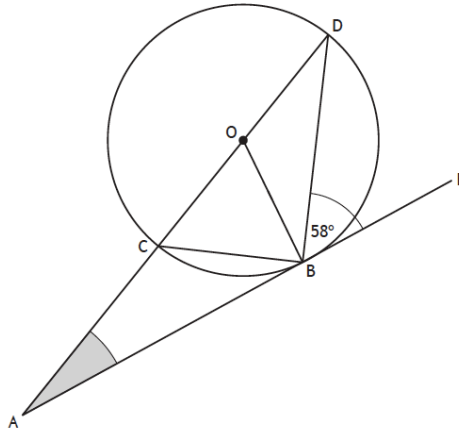


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Q4

In the diagram

- the line ABE is a tangent to the circle with centre O
- angle DBE is 58° .



Calculate the size of angle CAB.

Q5

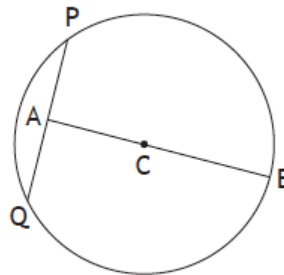
The diagram shows a circle, centre C.

The radius of the circle is 15cm.

A is the midpoint of the chord PQ.

AB is 27cm long.

Calculate the length of PQ.



Q6

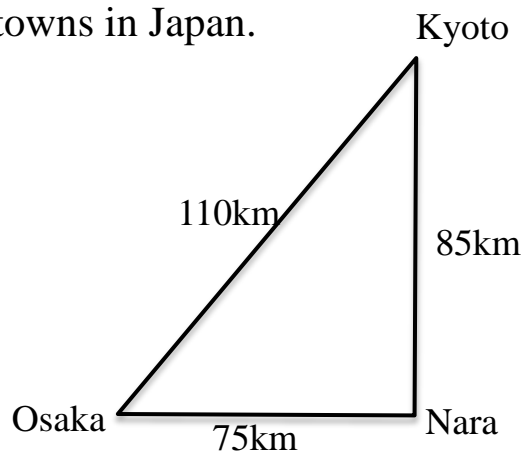
The diagram shows the position of 3 towns in Japan.

Nara is 75km due east of Osaka.

It is 85km from Nara to Kyoto.

It is 110km from Osaka to Kyoto.

Is Kyoto directly North of Nara?



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Q7

The diagram shows the circular cross-section of a milk tank.

The radius of the circle is 1.2m.

The width of the surface of the milk,
represented by ML , is 1.8m.

Calculate the depth of milk in the tank.

