

National 5 Maths Angles in Shapes

SQA past paper and specimen paper questions and answers by topic

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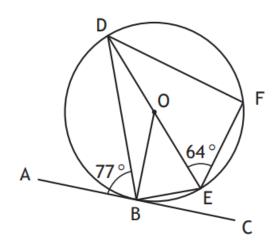
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National 5 Maths SQA 2015 Paper 1 Question 3





AC is a tangent to the circle, centre O, with point of contact B. DE is a diameter of the circle and F is a point on the circumference. Angle ABD is 77° and angle DEF is 64° .

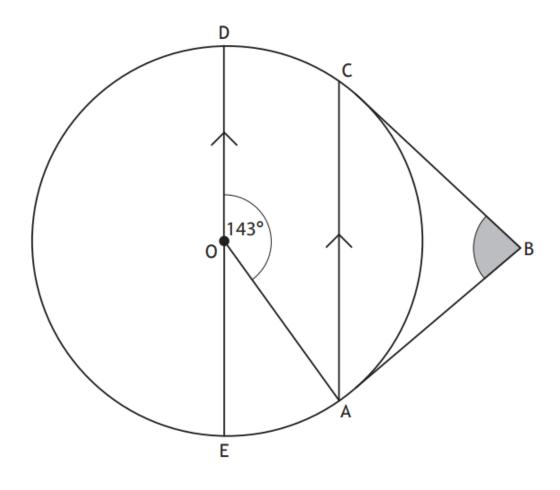
Calculate the size of angle BDF.

Answer:

National 5 Maths SQA 2016 Paper 2 Question 5



The diagram below shows a circle, centre O.



- AB and CB are tangents to the circle.
- AC and ED are parallel.
- Angle AOD is 143°.

Calculate the size of angle ABC.

3

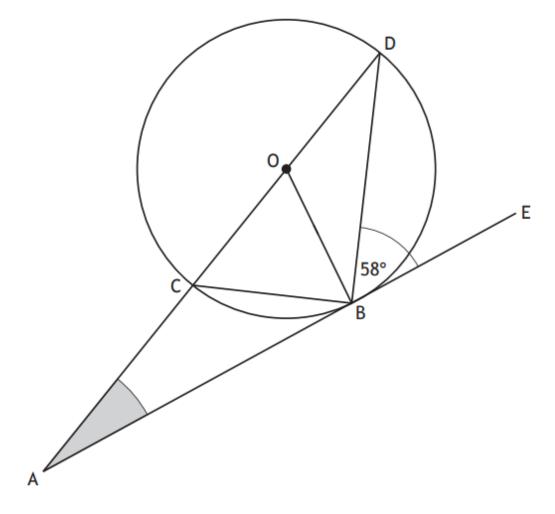
Answer:

National 5 Maths SQA 2017 Paper 1 Question 9



In the diagram shown below:

- ABE is a tangent to the circle centre O
- Angle DBE is 58°



Calculate the size of angle CAB.

3

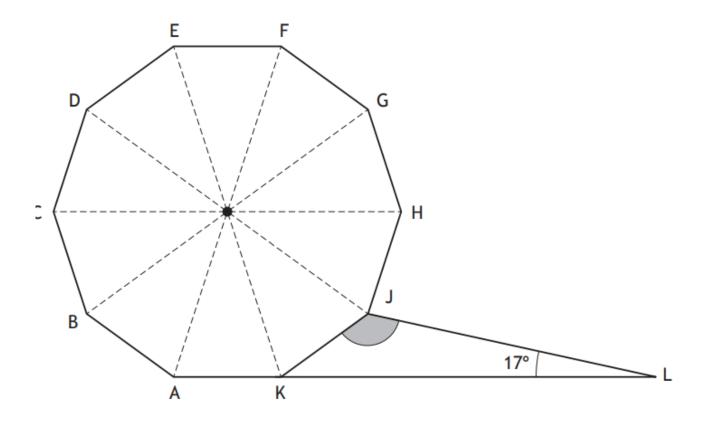
Answer:

National 5 Maths SQA 2018 Paper 1 Question 9



In the diagram shown below, ABCDEFGHJK is a regular decagon.

- Angle KLJ is 17°.
- AKL is a straight line.



Calculate the size of shaded angle KJL.

2

Answer:

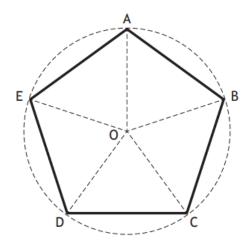
National 5 Maths SQA 2019 Paper 1 Question 11



Pam is designing a company logo.

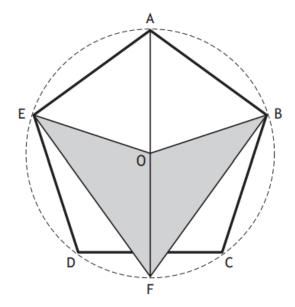
She starts by drawing a regular pentagon ABCDE.

The vertices of the pentagon lie on the circumference of a circle with centre O.



She then adds to the design as shown in the diagram below.

She then adds to the design as shown in the diagram below.



AF is a diameter of the circle.

Calculate the size of angle OFB.

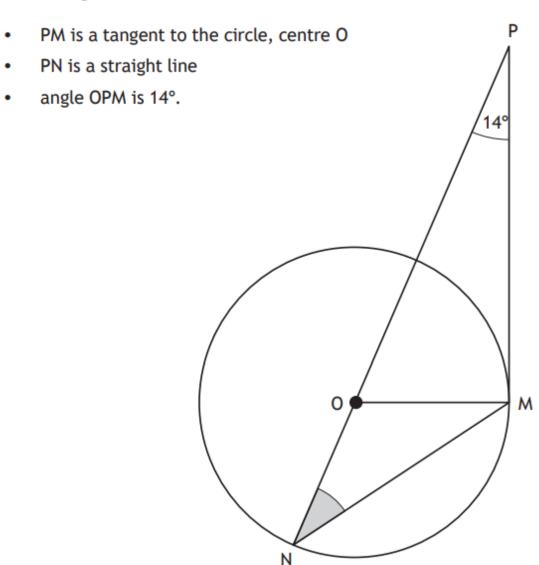
3

Answer:

National 5 Maths SQA 2021 Paper 1 Question 4



In the diagram shown below



Calculate the size of shaded angle ONM.

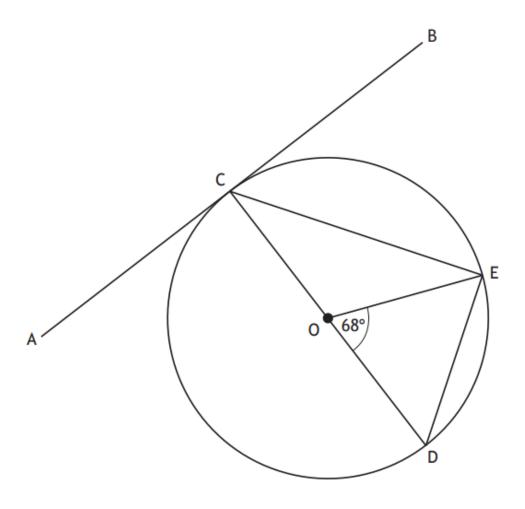
2

Answer:

National 5 Maths SQA 2022 Paper 1 Question 4



The diagram below shows a circle with centre O.



AB is a tangent to the circle at the point C.

CD is a diameter of the circle.

Angle EOD is 68°.

Calculate the size of angle ACE.

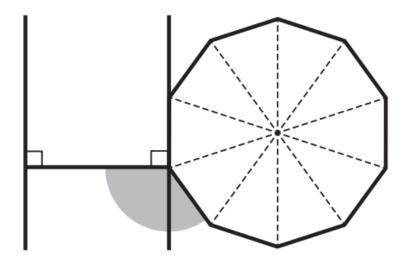
3

Answer:

National 5 Maths SQA 2023 Paper 2 Question 5

A logo consists of an H shape and a regular decagon.

The diagram represents the logo.



Calculate the size of the shaded angle.

2

Answer: