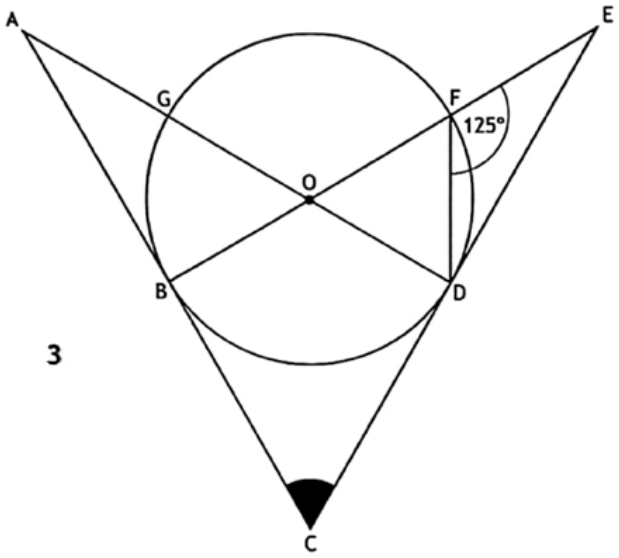
SQA Past paper questions

2024 - Paper 1 - Question 10

The diagram below shows a circle centre O.

- AC is a tangent to the circle at the point B.
- CE is a tangent to the circle at the point D.
- DG and BF are diameters of the circle.
- Angle DFE is 125°.

Calculate the size of shaded angle BCD. 3

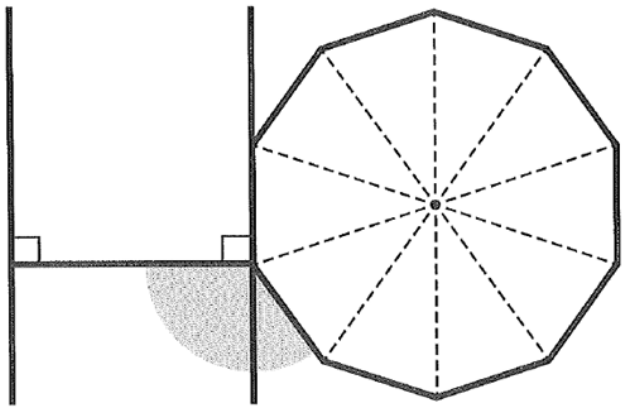


Click here for video solution.

2023 - Paper 2 - Question 5

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

The diagram represents the logo.

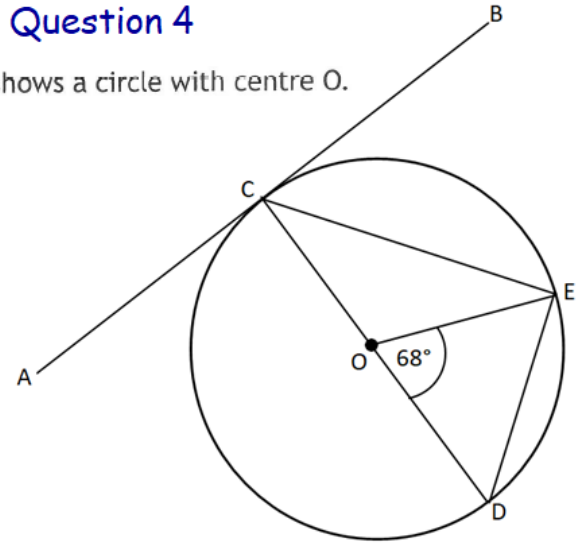


Calculate the size of the shaded angle. 2

Click here for video solution.

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°.

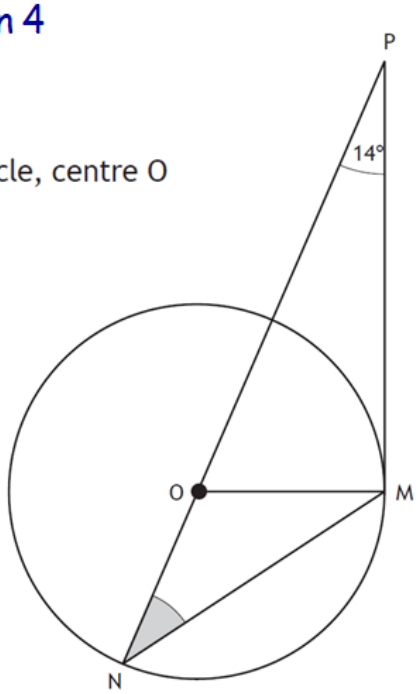
Calculate the size of angle ACE. 3

Click here for video solution.

2021 - Paper 1 - Question 4

In the diagram shown below

- PM is a tangent to the circle, centre O
- PN is a straight line
- angle OPM is 14°.



Calculate the size of shaded angle ONM. 2

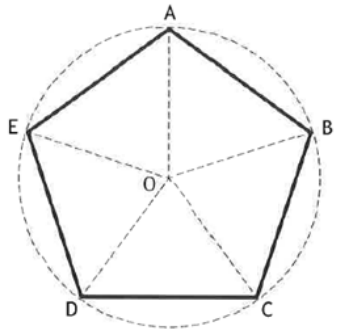
Click here for video solution.

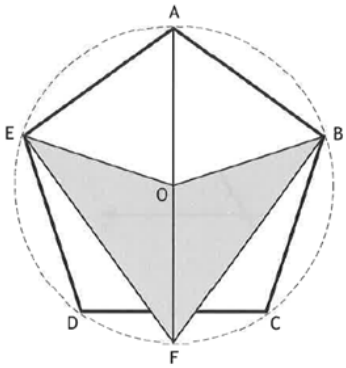
2019 - Paper 1 - Question 11

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.

AF is a diameter of the circle.

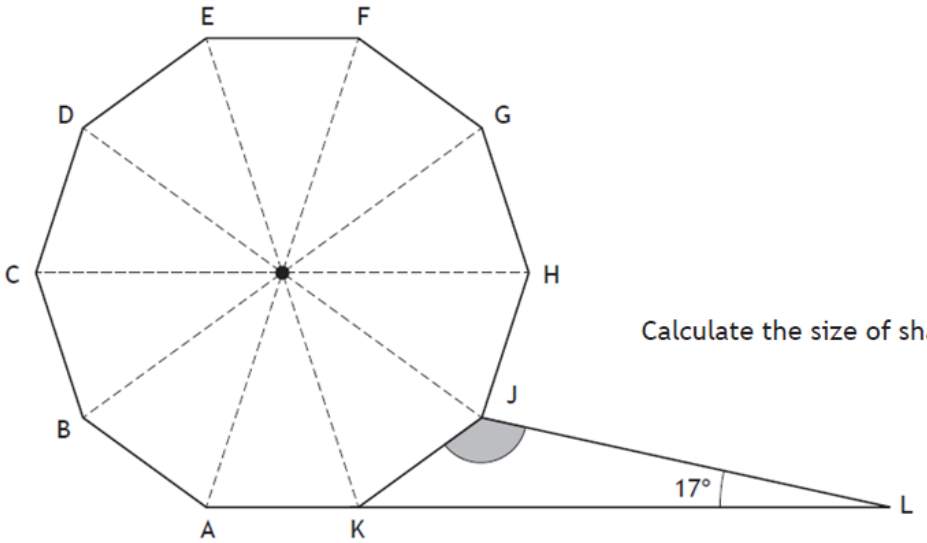
Calculate the size of angle OFB. 3

Click here for video solution.

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

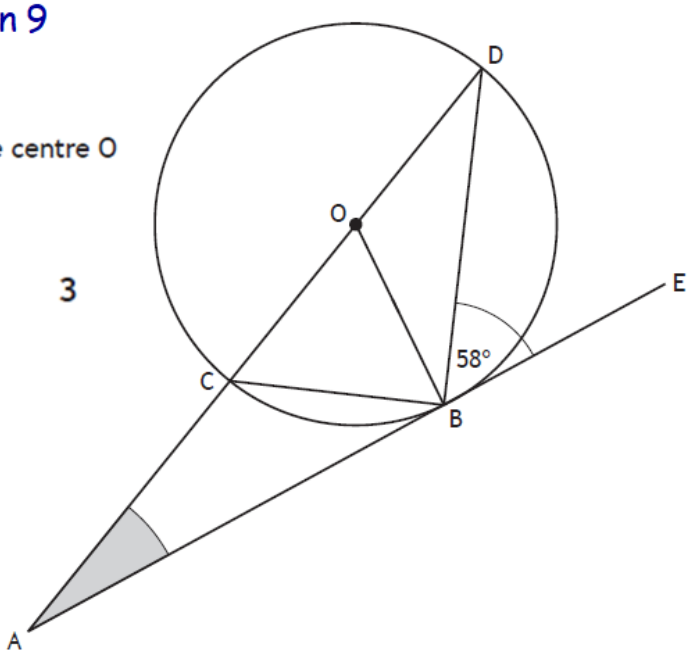
Click here for video solution.

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



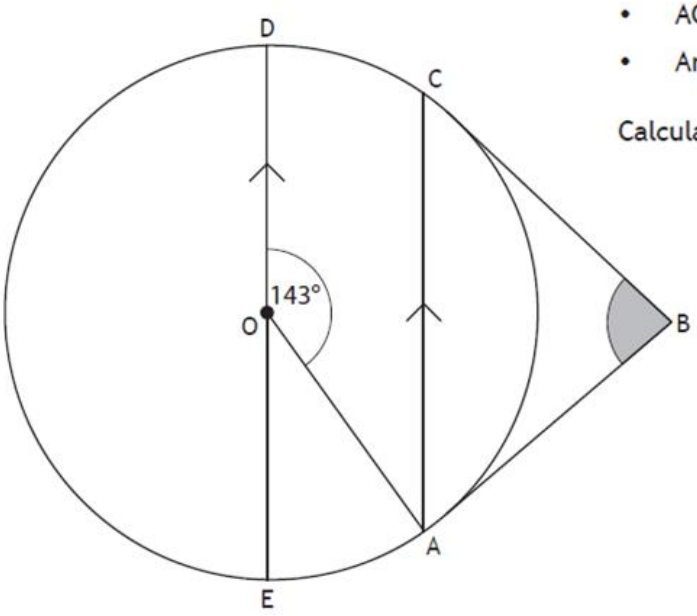
Click here for video solution.

2016 - Paper 2 - Question 5

The diagram below shows a circle, centre O.

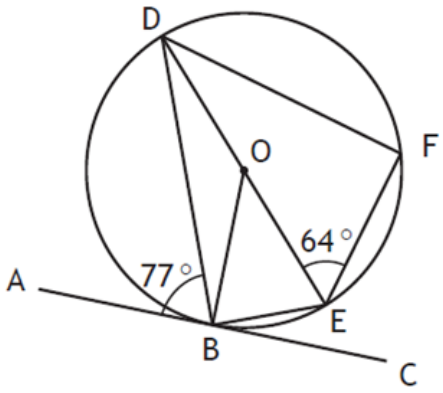
- AB and CB are tangents to the circle.
- AC and ED are parallel.
- Angle AOD is 143°.

Calculate the size of angle ABC. 3



Click here for video solution.

2015 - Paper 1 - Question 3

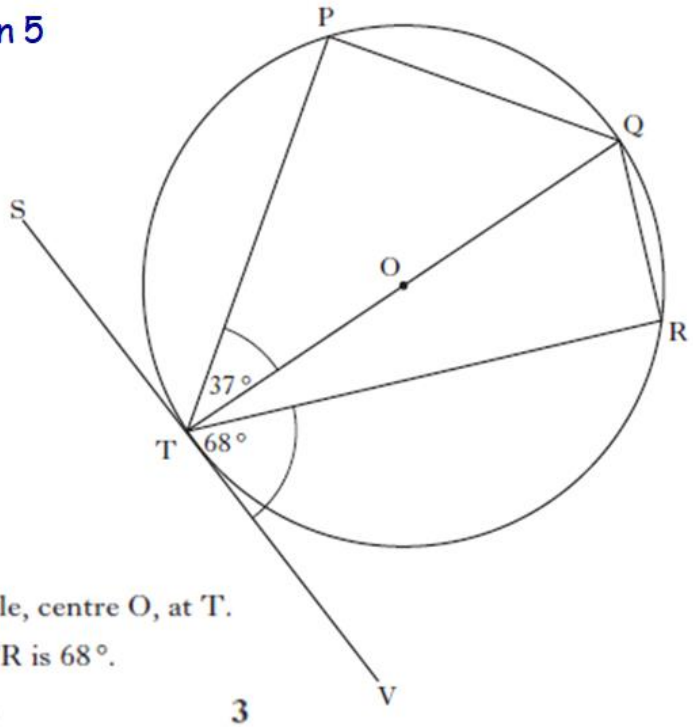


AC is a tangent to the circle, centre O, with point of contact B.
DE is a diameter of the circle and F is a point on the circumference.
Angle ABD is 77° and angle DEF is 64°.
Calculate the size of angle BDF.

3

Click here for video solution.

2013 - Paper 1 - Question 5

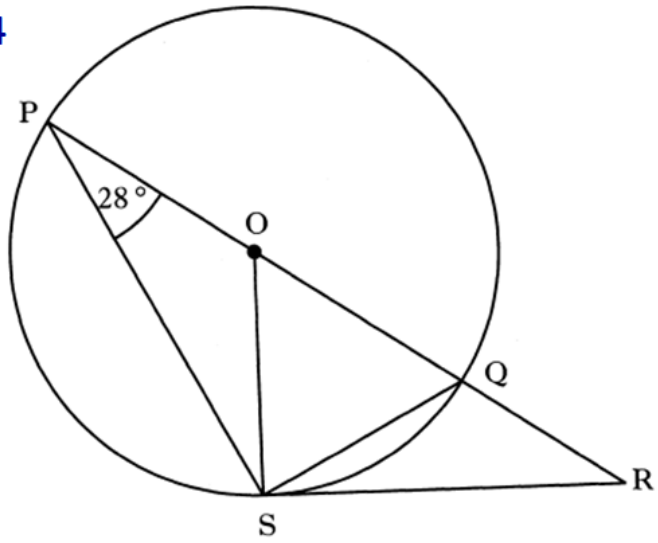


The tangent SV touches the circle, centre O, at T.
Angle PTQ is 37° and angle VTR is 68°.
Calculate the size of angle PQR.

3

Click here for video solution.

2012 - Paper 1 - Question 4



In the above diagram,

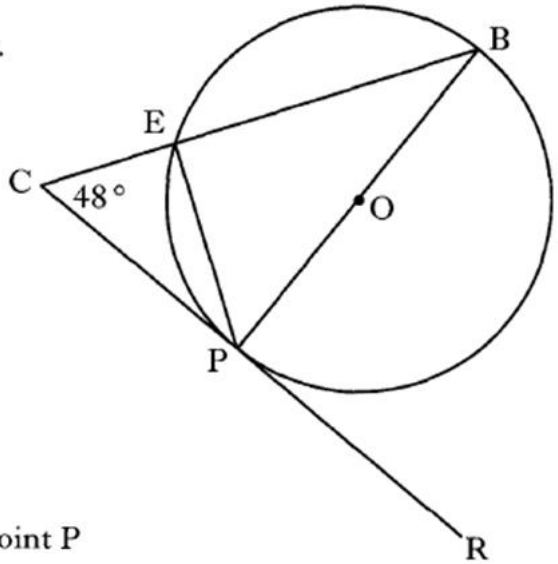
- O is the centre of the circle
- PQ is a diameter of the circle
- PQR is a straight line
- RS is a tangent to the circle at S
- angle OPS is 28°.

Calculate the size of angle QRS. **3**

Click here for video solution.

2011 - Paper 1 - Question 3

A circle, centre O, is shown below.



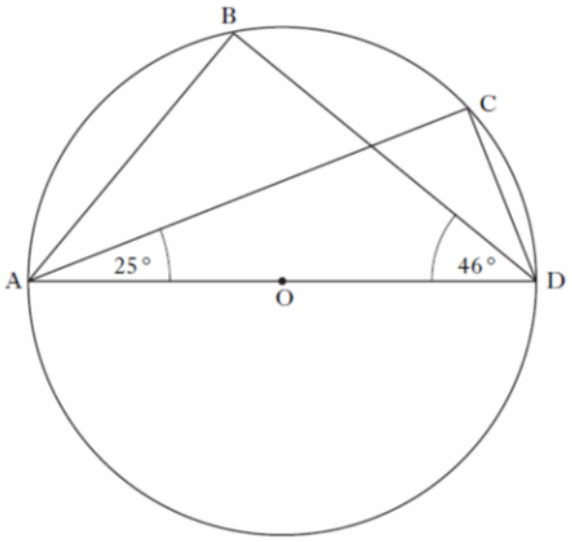
In the circle

- PB is a diameter
- CR is a tangent to the circle at point P
- Angle BCP is 48°.

Calculate the size of angle EPR. **3**

Click here for video solution.

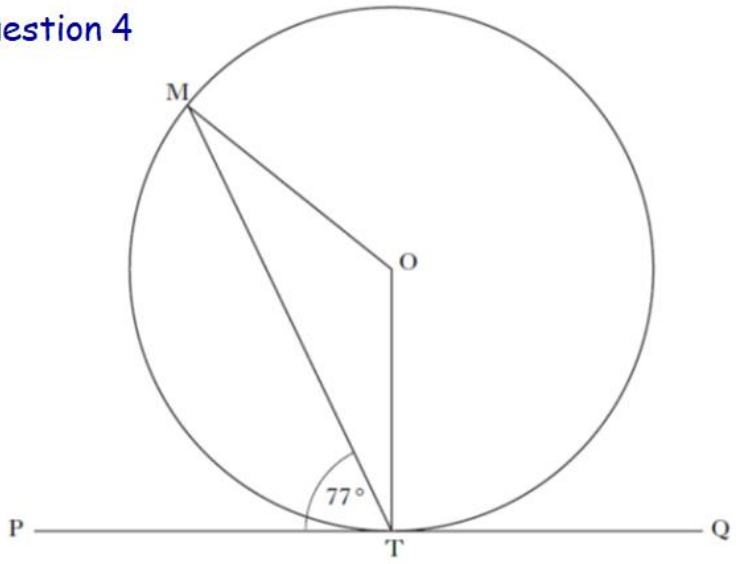
2008 - Paper 1 - Question 7



AD is a diameter of a circle, centre O.
B and C are points on the circumference of the circle.
Angle CAD = 25°.
Angle BDA = 46°.
Calculate the size of angle BAC. **3**

Click here for video solution.

2007 - Paper 2 - Question 4

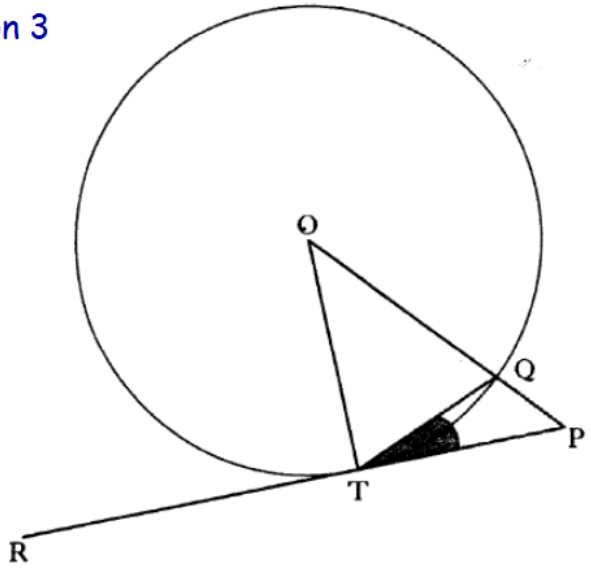


The tangent PQ touches the circle, centre O, at T.
Angle MTP is 77°.

Calculate the size of angle MOT. **2**

Click here for video solution.

2004 - Paper 1 - Question 3

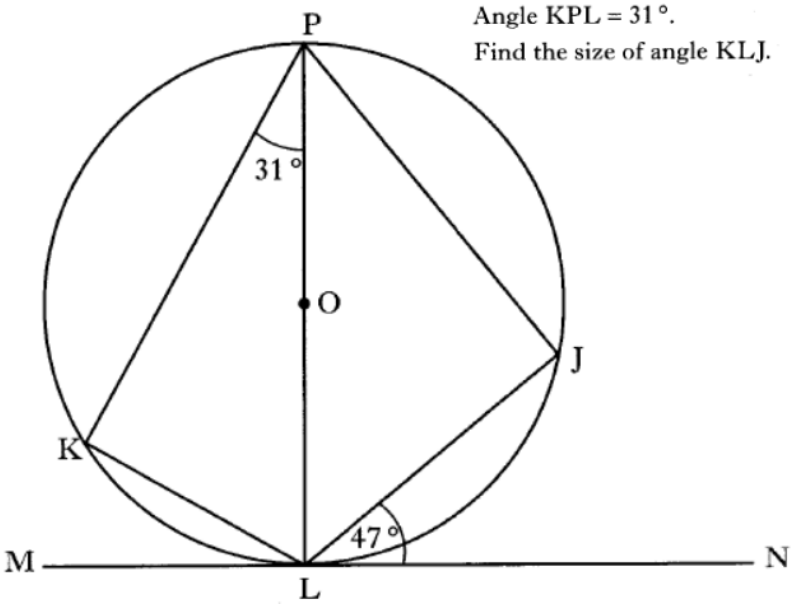


RP is a tangent to the circle, centre O, with a point of contact T.
The shaded angle PTQ = 24°.
Calculate the size of angle OPT. **3**

Click here for video solution.

2003 - Paper 2 - Question 1

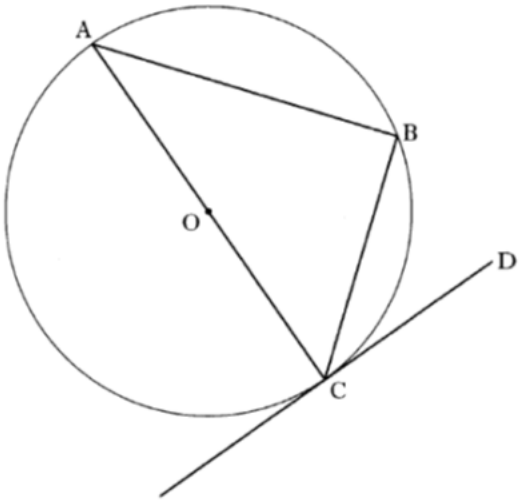
The tangent, MN, touches the circle, centre O, at L.
Angle JLN = 47°.
Angle KPL = 31°.
Find the size of angle KLJ.



3

Click here for video solution.

2000 - Paper 1 - Question 4



- A, B and C are points on the circumference of a circle, centre O.
- CD is a tangent to the circle.
- Angle BCD = 25°.

Calculate the size of angle BAC.
Show all working. **3**

Click here for video solution.