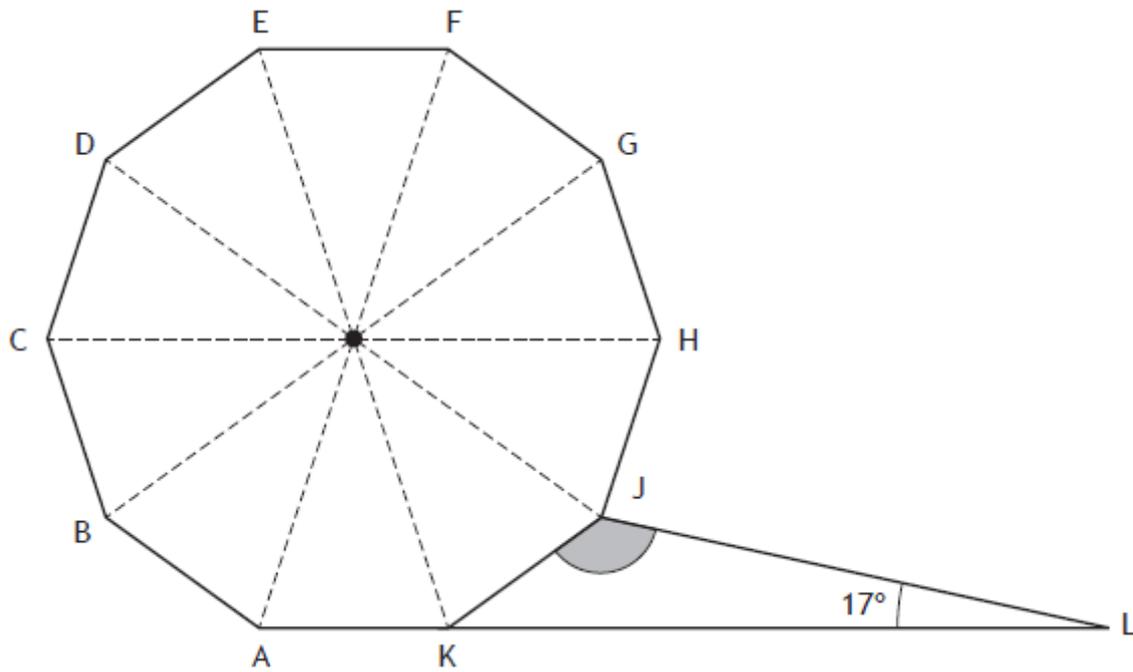


2018 P1 Q9

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.

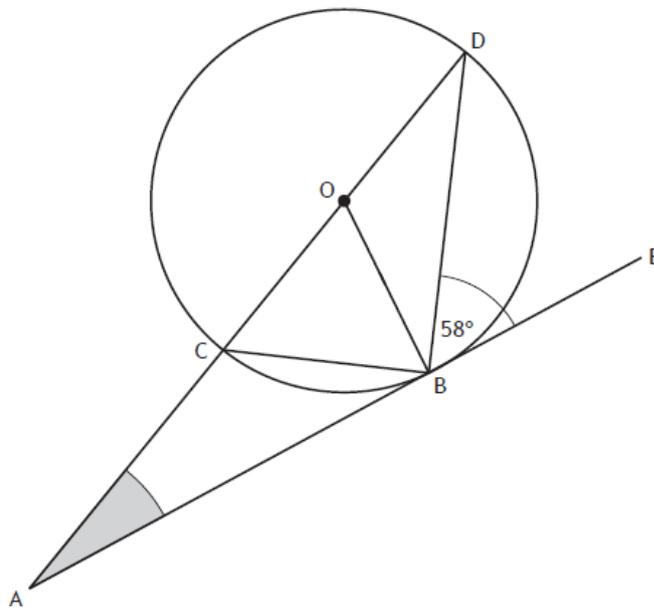
2

Ans 127°

2017 P1 Q9

In the diagram shown below:

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



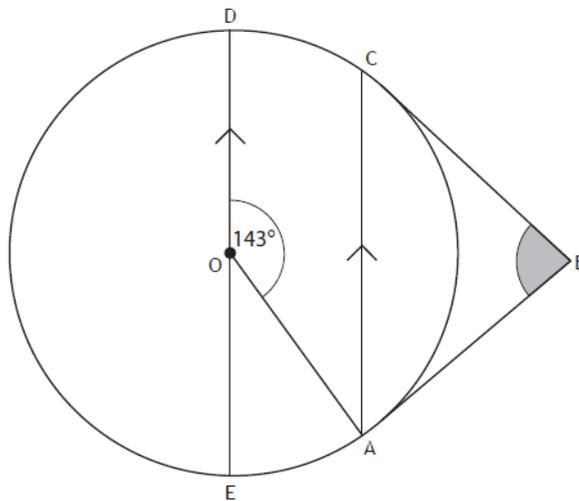
Calculate the size of angle CAB.

3

Ans 26°

2016 P2 Q5

The diagram below shows a circle, centre O.



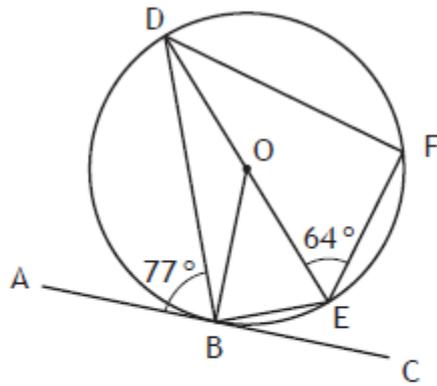
- AB and CB are tangents to the circle.
- AC and ED are parallel.
- Angle AOD is 143° .

Calculate the size of angle ABC.

3

Ans 74°

2015 P1 Q3

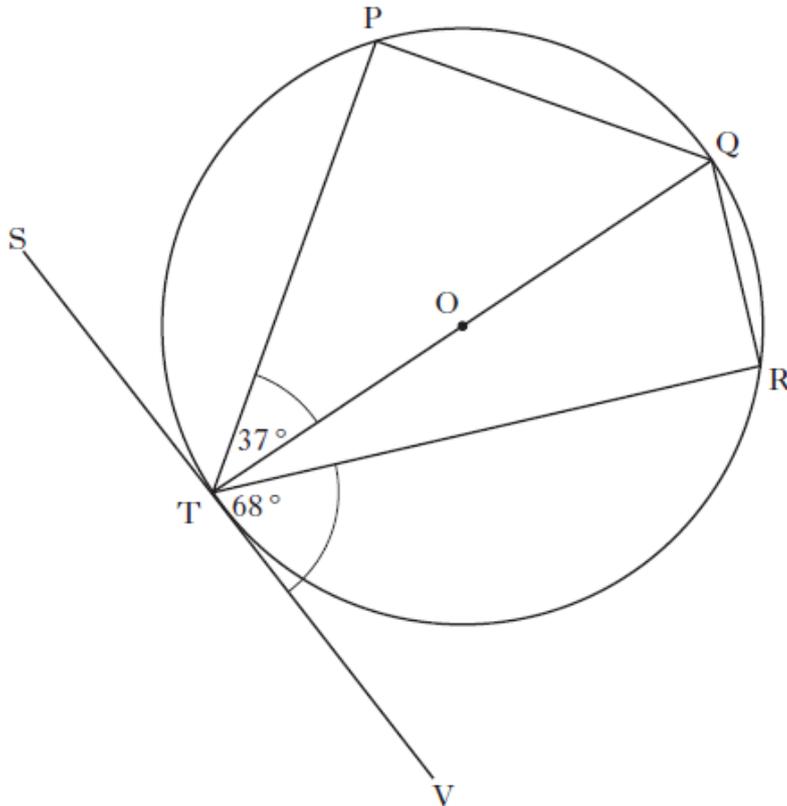


AC is a tangent to the circle, centre O, with point of contact B.
 DE is a diameter of the circle and F is a point on the circumference.
 Angle ABD is 77° and angle DEF is 64° .
 Calculate the size of angle BDF.

3

Ans 39°

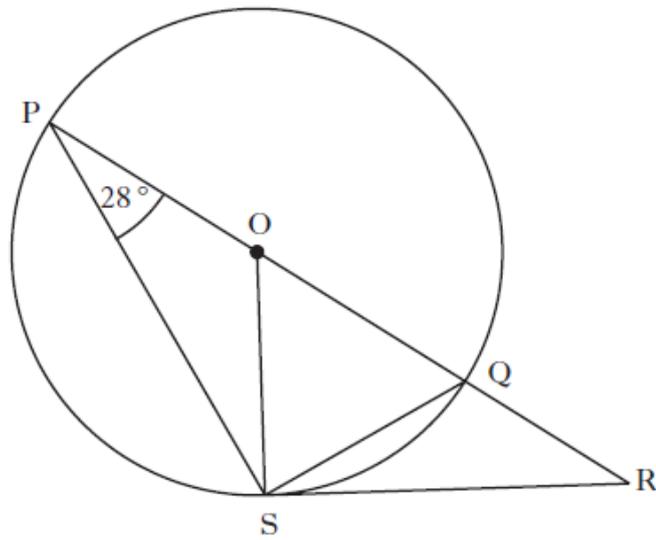
2013 P1 Q5



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

Ans 121°

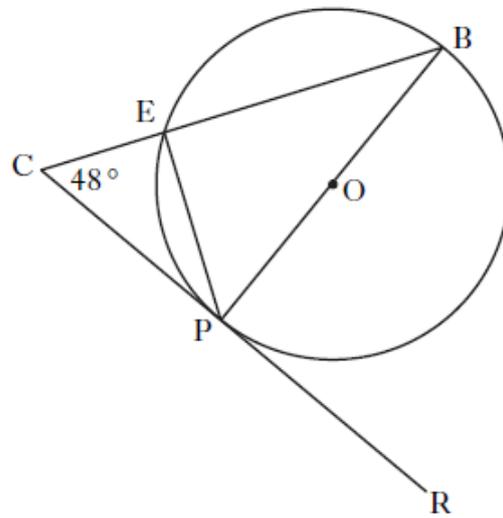


In the above diagram,

- 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 .

A circle, centre O, is shown below.

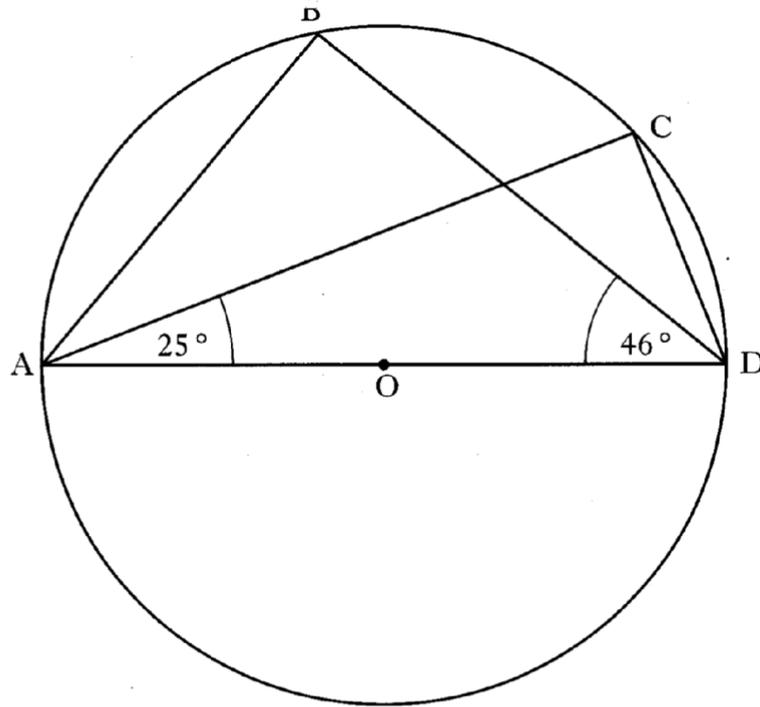


In the circle

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

Calculate the size of angle EPR.

Ans 138°



AD is a diameter of a circle, centre O.

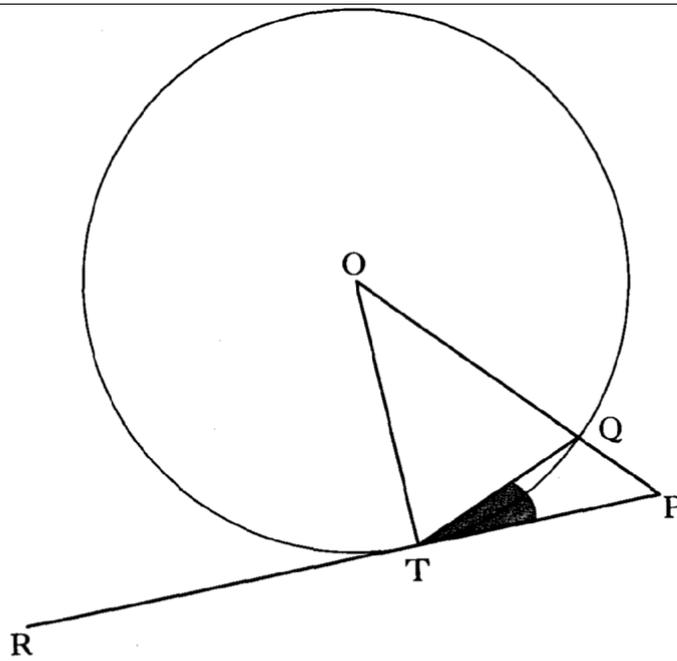
B and C are points on the circumference of the circle.

Angle CAD = 25° .

Angle BDA = 46° .

Calculate the size of angle BAC.

2004 P1 Q3

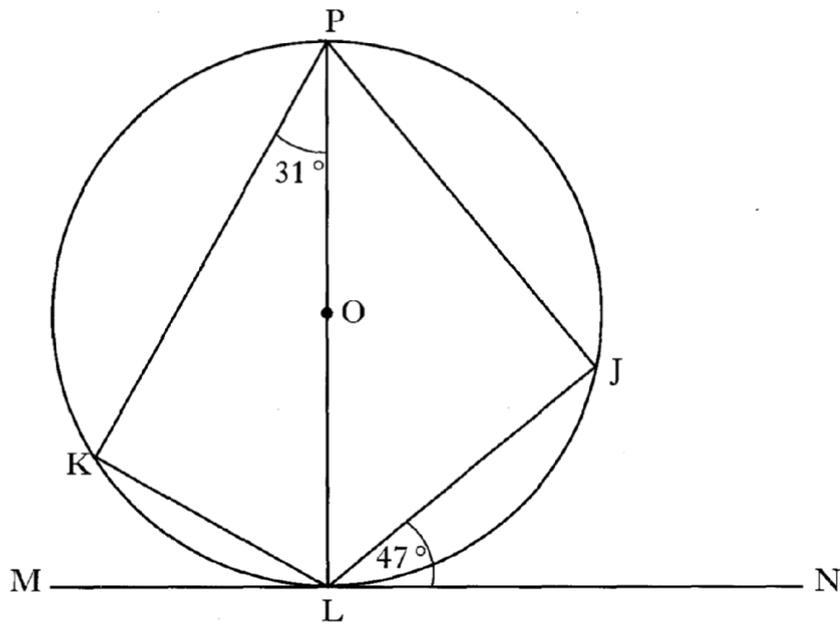


RP is a tangent to the circle, centre O, with a point of contact T.
 The shaded angle $PTQ = 24^\circ$.
 Calculate the size of angle OPT.

3

Ans 42°

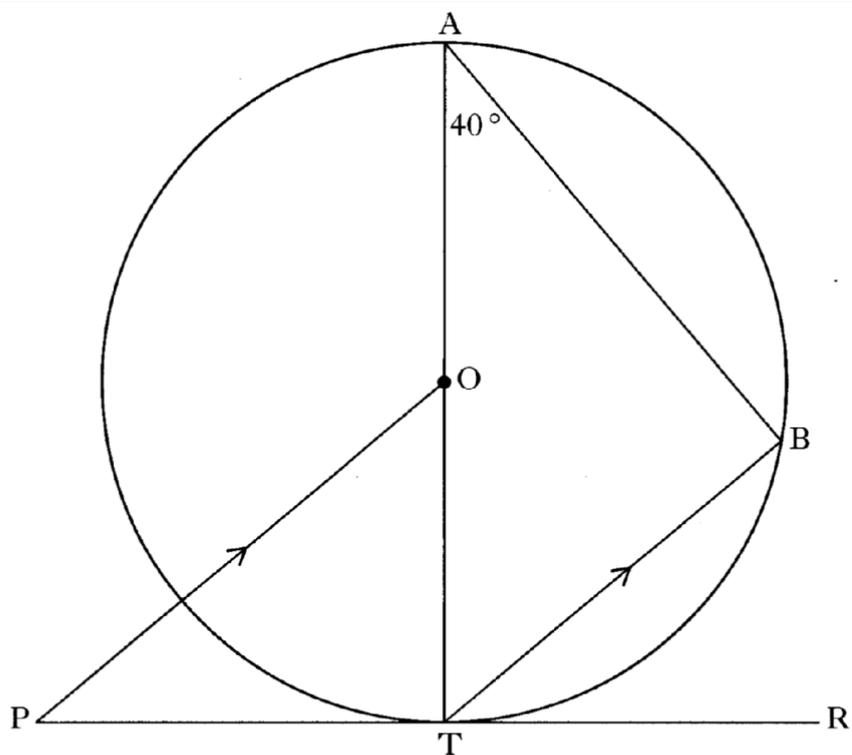
2003 P2 Q1



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

3

Ans 102°



PTR is a tangent to a circle, centre O.

Angle $BAT = 40^\circ$.

PO is parallel to TB.

Calculate the size of angle OPT.

Show all working.

3

Ans 40°