13.
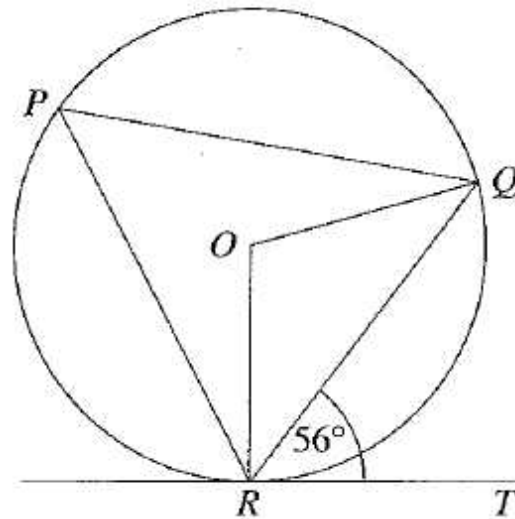

Diagram **NOT**
accurately drawn

P, Q and R are points on a circle.
O is the centre of the circle.
RT is the tangent to the circle at R.
Angle $QRT = 56°$.

(a) Find

(i) the size of angle RPQ,

.... $^\circ$

(ii) the size of angle ROQ.
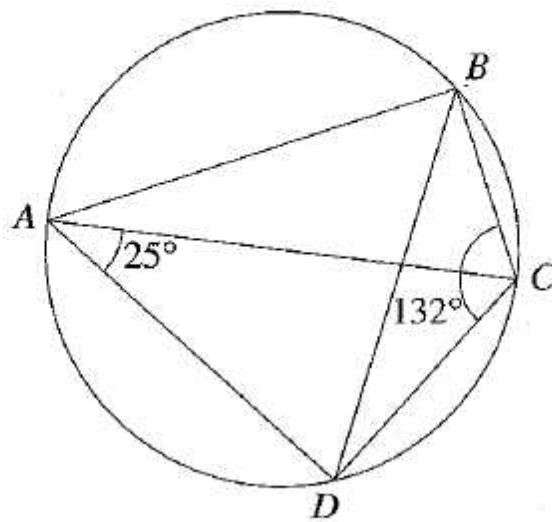
.... $^\circ$

(2)

Diagram **NOT** accurately drawn

A, *B*, *C* and *D* are points on a circle.
AC is a diameter of the circle.
Angle *CAD* = 25° and angle *BCD* = 132°.

(b) Calculate

   (i)   the size of angle *BAC*,

..................°

   (ii) the size of angle *ABD*.

..................°

(3)

10.
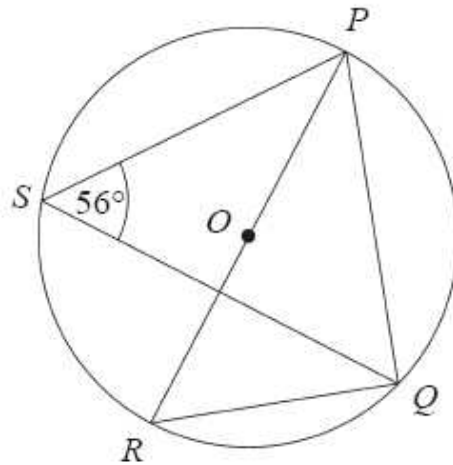
P, Q, R and S are points on the circumference of a circle, centre O.
PR is a diameter of the circle.
Angle $PSQ = 56°$.

(a) Find the size of angle PQR.
 Give a reason for your answer.

.... °

(2)

(b) Find the size of angle PRQ.
 Give a reason for your answer.

.... °

(2)

(c) Find the size of angle POQ.
 Give a reason for your answer.

.... °

(2)

12.

Diagram **NOT**
accurately drawn.
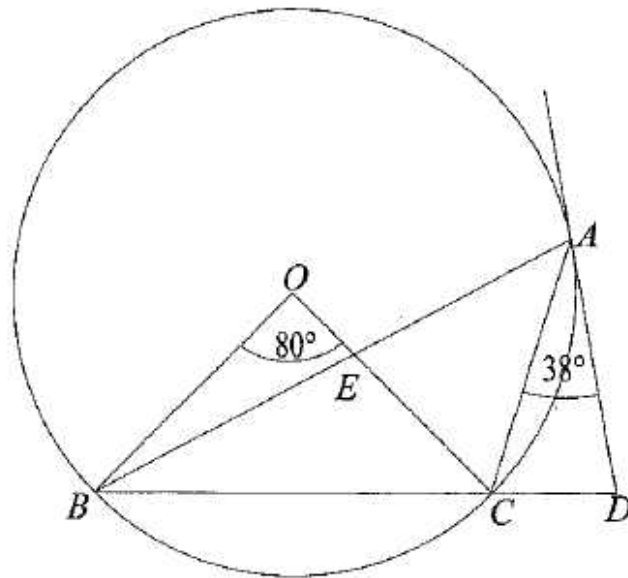
Points A, B and C lie on the circumference of a circle with centre O.
DA is the tangent to the circle at A.
BCD is a straight line.
OC and AB intersect at E.

Angle $BOC = 80°$.
Angle $CAD = 38°$.

(a) Calculate the size of angle BAC.

.........................°

(1)

(b) Calculate the size of angle OBA.

.........................°

(3)

(c) Give a reason why it is not possible to draw a circle with diameter ED through the point A.

....

....
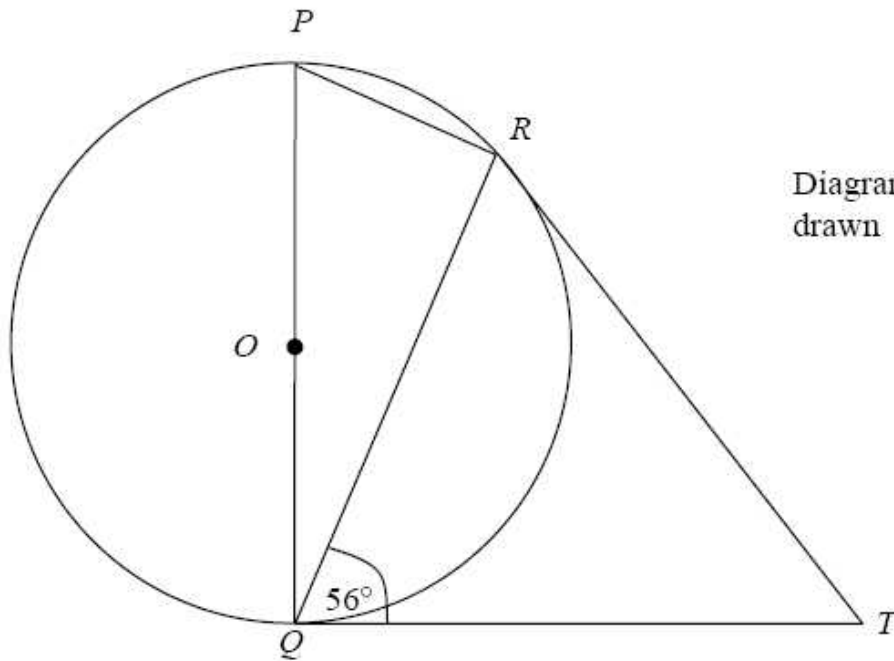
(1)

12.

Diagram **NOT** accurately drawn

P, Q and R are points on a circle, centre O.
POQ is a straight line.
TQ and TR are tangents to the circle.
Angle $TQR = 56°$.

(a)   Explain why angle $PQR = 34°$.

....

....

(1)

(b)   Calculate the size of angle PRT.
        Give reasons for your answer.

.....................°

(3)