A and B are points on a circle, centre O.
The lines CA and CB are tangents to the circle.
CA = 5.7 cm.
CO = 6.9 cm.

(a) Give a reason why angle CAO = 90°.

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(b) Calculate the perimeter of the kite CAOB.
Give your answer correct to 3 significant figures.

.............................................................. cm

.............................................................. (5)

Q11

(Total 6 marks)
A, B, C and D are points on a circle.

$ABE$ and $DCE$ are straight lines.

$AT$ is a tangent to the circle.

$DCE$ is parallel to $AT$.

Angle $EAT = 47^\circ$. Angle $BAD = 56^\circ$.

(a) (i) Find the size of angle $AED$.

(ii) Give a reason for your answer.

(b) Find the size of angle $BCD$.

(c) (i) Find the size of angle $ADB$.

(ii) Give a reason for your answer.

(Total 5 marks)
A, B, C and D are points on a circle, centre O.
Angle ABC = 58°.

(a) (i) Calculate the size of angle AOC.

(ii) Give a reason for your answer.

(b) (i) Calculate the size of angle ADC.

(ii) Give a reason for your answer.

(Total 4 marks)
A, B, C and D are four points on the circumference of a circle. The chords AC and BD intersect at E. 
AE = 3.6 cm, CE = 2.8 cm, DE = 2.4 cm and AD = 4.9 cm.

(a) Calculate the length of BE.

(b) Calculate the size of angle AED. Give your answer correct to 3 significant figures.
20.

Diagram NOT accurately drawn

$A, B, C$ and $D$ are points on the circumference of a circle. $AB$ is a diameter of the circle. Angle $ADC = 119^\circ$.

(a) (i) Work out the size of angle $ABC$.

(ii) Give a reason for your answer.

(b) Work out the size of angle $BAC$.

(Total 4 marks)
21.

Diagram NOT accurately drawn

A, B and L are points on a circle, centre O.
AB is a chord of the circle.
M is the midpoint of AB.
LOM is a straight line.
AB = 24 cm.
LM = 18 cm.

Calculate the diameter of the circle.

............................................. cm
(Total 4 marks)
A, B, C and D are points on a circle, centre O. 
AC is a diameter of the circle. 
Angle CBD = 38°.

(a) (i) Find the size of angle DAC.

(ii) Give a reason for your answer.

(b) Find the size of angle ACD.

(Total 4 marks)