

INTERSECTING CHORDS

[ESTIMATED TIME: 30 minutes]

GCSE

(+ IGCSE) EXAM QUESTION PRACTICE

1.

[2 marks]

PTR and QTS are chords of a circle.

$$PT = 3 \text{ cm.}$$

$$ST = 10 \text{ cm.}$$

$$RT = 15 \text{ cm.}$$

$$QT = x \text{ cm.}$$

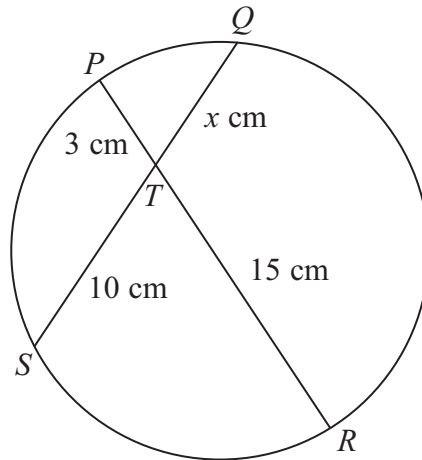


Diagram **NOT** accurately drawn

Calculate the value of x .

$$x = \dots\dots\dots$$

2.

[2 marks]

APC and BPD are chords of a circle.

$$AP = 4 \text{ cm.}$$

$$BP = 3 \text{ cm.}$$

$$PD = 14 \text{ cm.}$$

$$PC = x \text{ cm.}$$

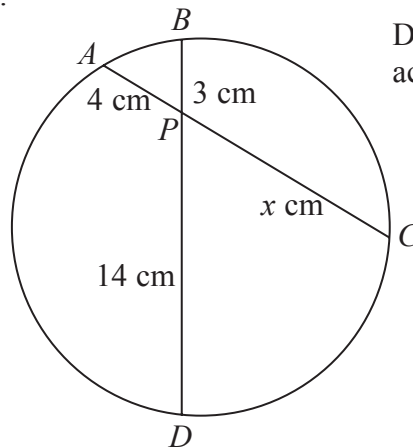
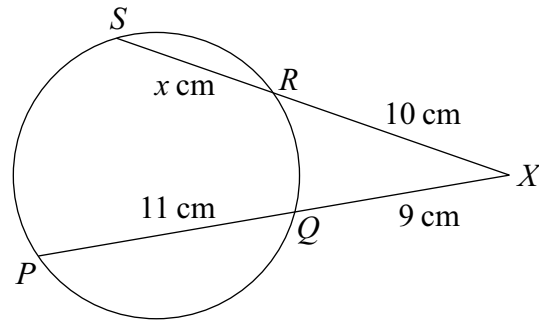


Diagram **NOT** accurately drawn

Calculate the value of x .

$$x = \dots\dots\dots$$



The diagram shows a circle, $PQRS$.

SRX and PQX are straight lines.

$PQ = 11$ cm. $QX = 9$ cm. $RX = 10$ cm. $SR = x$ cm.

Find the value of x .

$x = \dots\dots\dots$

AEC and DEB are chords of a circle.

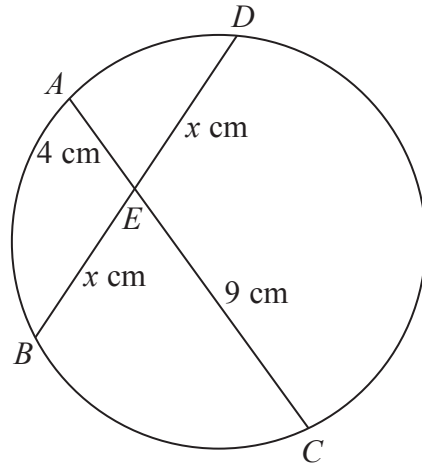


Diagram **NOT**
accurately drawn

$$AE = 4 \text{ cm.}$$

$$CE = 9 \text{ cm.}$$

$$DE = BE = x \text{ cm.}$$

Calculate the value of x .

$$x = \dots\dots\dots$$

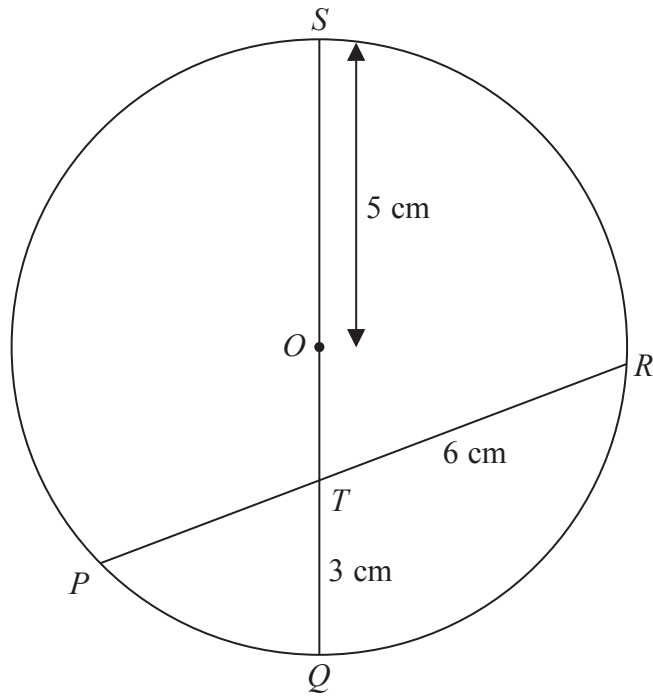


Diagram **NOT**
accurately drawn

P , Q , R and S are points on a circle, centre O .

QS is a diameter of the circle.

QS and PR intersect at the point T .

$OS = 5$ cm, $QT = 3$ cm and $TR = 6$ cm.

Work out the length of PT .

..... cm

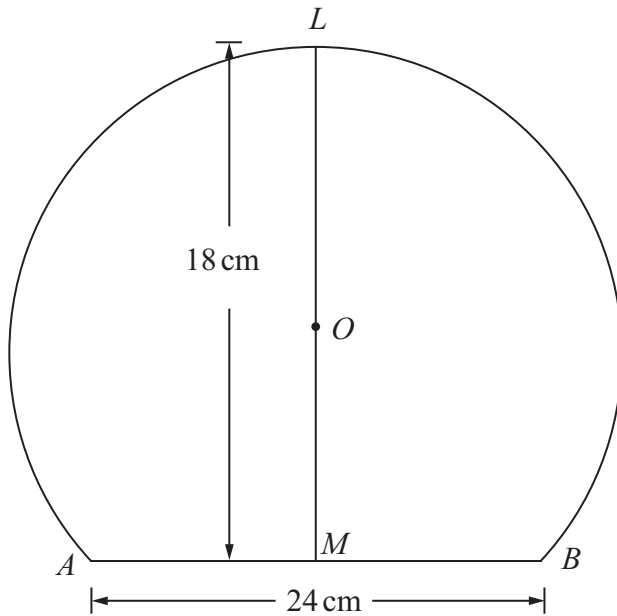


Diagram **NOT**
accurately drawn

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

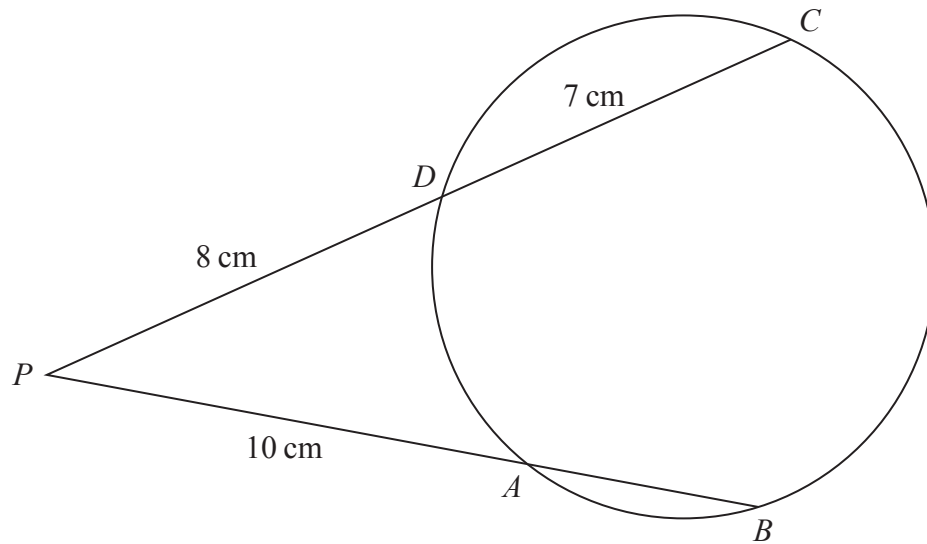


Diagram **NOT**
accurately drawn

A, B, C and D are points on a circle.

PAB and PDC are straight lines.

$PA = 10\text{ cm}$, $PD = 8\text{ cm}$ and $DC = 7\text{ cm}$.

Calculate the length of AB .

.....cm

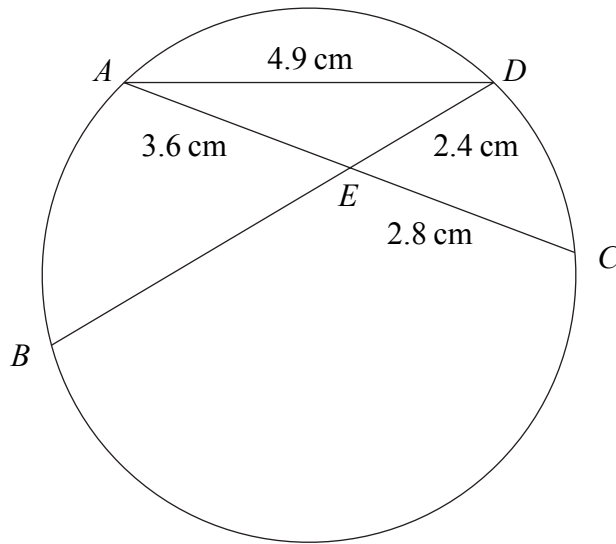


Diagram **NOT**
accurately drawn

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 .

..... cm
(3)

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

.....
°
(3)

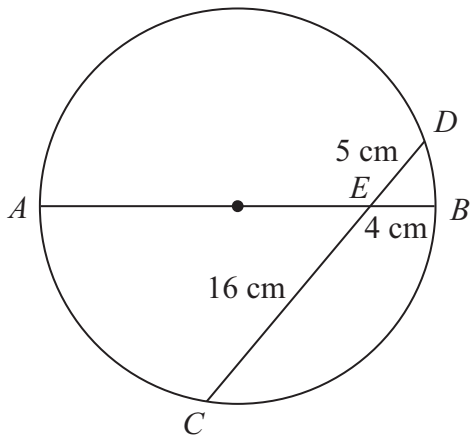


Diagram **NOT** accurately drawn

AB is a diameter of a circle.
 CD is a chord of the circle.
 AB and CD intersect at E .
 $BE = 4$ cm, $CE = 16$ cm and $DE = 5$ cm.

(a) Calculate the length of AE .

..... cm
(2)

(b) (i) Find the radius of the circle.

..... cm

(ii) Calculate the size of angle AED .
 Give your answer correct to 1 decimal place.

.....^o
(5)