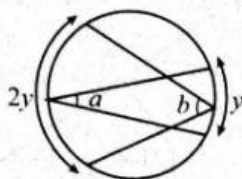


BAHAGIAN/SECTION A

Arahan: Jawab semua soalan.
Instruction: Answer all questions.

- 1** Dalam rajah di bawah, sudut a dan b pada lilitan bulatan dicangkum dengan lengkok y dan $2y$ masing-masing.
In the diagram below, angles a and b at the circumference of the circle subtended by arcs y and $2y$ respectively.

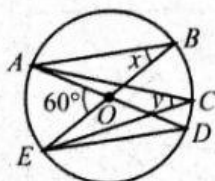


Antara berikut, yang manakah merupakan hubungan antara sudut a dengan b ?

Which of the following is the relationship between the angles a and b ?

- A $a = 2b$
- B $b = 2a$
- C $a = b$
- D $b = 3a$

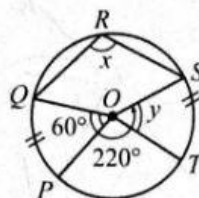
- 2** Rajah di bawah menunjukkan suatu bulatan berpusat di O . Titik-titik A, B, C, D dan E terletak pada lilitan bulatan.
The diagram below shows a circle with centre O . Points A, B, C, D and E lie on the circumference of the circle.



Hitung nilai $x + y$.
Calculate the value of $x + y$.

- A 20°
- B 30°
- C 60°
- D 90°

- 3** Rajah di bawah menunjukkan suatu bulatan berpusat di O . Titik-titik Q, R dan S terletak pada lilitan bulatan. Diberi bahawa lengkok $PQ = TS$.
The diagram below shows a circle with centre O . Points Q, R and S lie on the circumference of the circle. Given that arc $PQ = TS$.



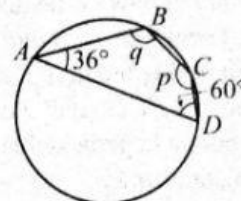
Cari nilai x dan y .
Find the values of x and y .

- A $x = 60^\circ, y = 220^\circ$
- B $x = 100^\circ, y = 60^\circ$
- C $x = 60^\circ, y = 110^\circ$
- D $x = 110^\circ, y = 60^\circ$

- 4** Antara berikut, yang manakah sisi empat kitaran?
Which of the following is a cyclic quadrilateral?



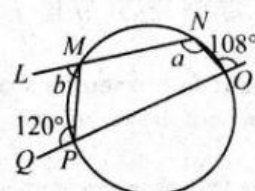
- 5** Rajah di bawah menunjukkan sisi empat kitaran $ABCD$.
The diagram below shows a cyclic quadrilateral $ABCD$.



Hitung nilai p dan q .
Calculate the values of p and q .

- A $p = 144^\circ, q = 120^\circ$
- B $p = 120^\circ, q = 144^\circ$
- C $p = 145^\circ, q = 120^\circ$
- D $p = 144^\circ, q = 110^\circ$

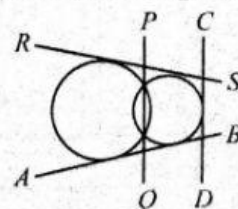
- 6** Rajah di bawah menunjukkan sisi empat kitaran $MNOP$. LMN dan QPO ialah garis lurus.
The diagram below shows a cyclic quadrilateral $MNOP$. LMN and QPO are straight lines.



Hitung nilai $a + b$.
Calculate the value of $a + b$.

- A 192°
- B 108°
- C 120°
- D 72°

- 7** Rajah di bawah menunjukkan dua bulatan dengan tangennya.
The diagram below shows two circles and their tangents.



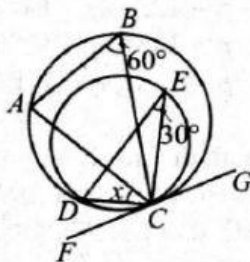
Nyatakan tangen sepunya bagi kedua-dua bulatan itu.

State the common tangents for both circles.

- A AB dan/and PS
- B CD dan/and PQ
- C PQ dan/and AB
- D RS dan/and CD

- 8** Rajah di bawah menunjukkan dua segi tiga ACB dan DCE dalam dua bulatan. Diberi bahawa FCG ialah tangen sepunya kepada kedua-dua bulatan itu.

The diagram below shows two triangles ACB and DCE in two circles. Given that FCG is a common tangent for both circles.



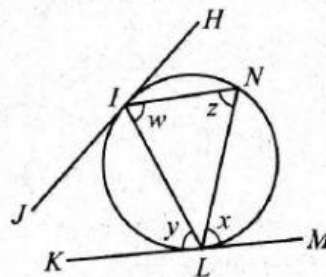
Cari nilai x .

Find the value of x .

- A 20°
- B 30°
- C 60°
- D 90°

- 9** Rajah di bawah menunjukkan sebuah segi tiga ILN dalam satu bulatan. Diberi bahawa HIJ dan KLM ialah tangen kepada bulatan.

The diagram below shows a triangle ILN in a circle. Given that HIJ and KLM are tangents to the circle.



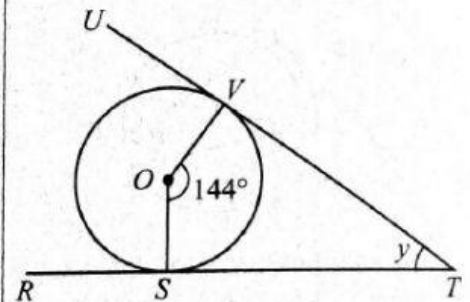
Antara berikut, yang manakah merupakan hubungan antara sudut yang betul?

Which of the following is the correct relationship between the angles?

- A $w = y$
- B $y = z$
- C $z = x$
- D $w = z$

- 10** Rajah di bawah menunjukkan suatu bulatan berpusat di O . RST dan UVT ialah tangen kepada bulatan.

The diagram below shows a circle with centre O . RST and UVT are tangents to the circle.



Cari nilai y .

Find the value of y .

- A 16°
- B 22°
- C 32°
- D 36°

BAHAGIAN/ SECTION B

Arahan: Jawab semua soalan.

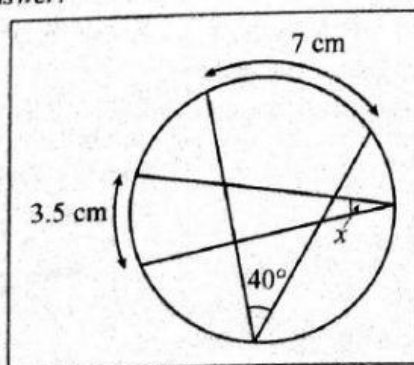
Instruction: Answer all questions.

- 11 (a)** Bulatkan jawapan yang betul bagi nilai x dalam bulatan berikut.

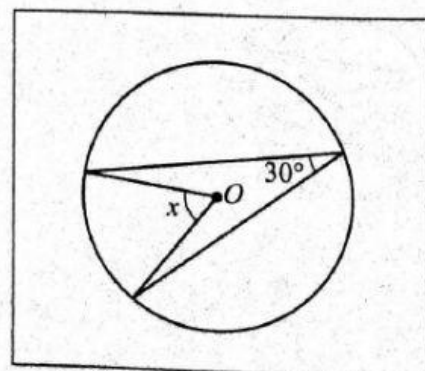
Circle the correct answer for the value of x in the following circles.

[2 markah/marks]

Jawapan/Answer:



- 20°
- 40°
- 80°

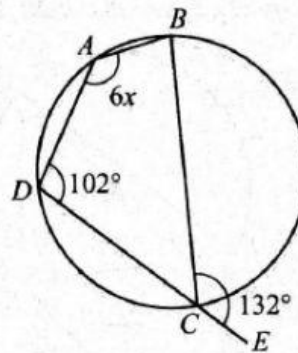


- 15°
- 30°
- 60°

(b) Rajah di bawah menunjukkan sisi empat kitaran $ABCD$ dan garis lurus DCE .

6.2 The diagram below shows a cyclic quadrilateral $ABCD$ and a straight line DCE .

Modul
Hebat
Perak



Lengkapkan langkah pengiraan di bawah bagi menentukan nilai x .

Complete the calculation steps below to determine the value of x .

[2 markah/marks]

Jawapan/Answer:

$$x = \frac{\boxed{}}{6}$$

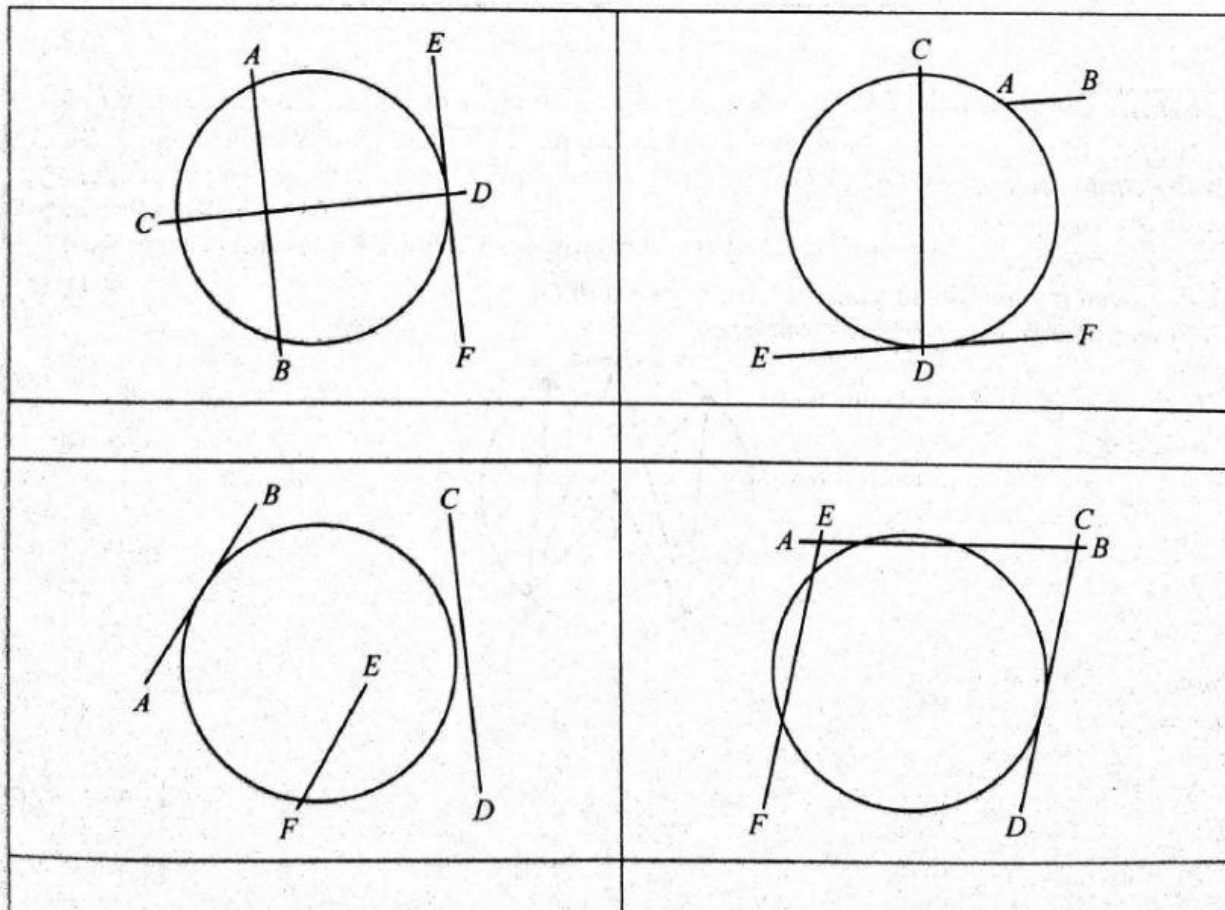
$$= \boxed{}$$

12 Nyatakan tangen kepada bulatan yang berikut.

6.3 State the tangent to the following circles.

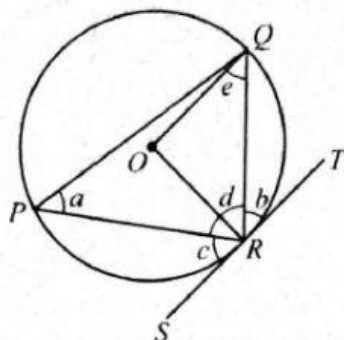
[4 markah/marks]

Jawapan/Answer:



- 13** Rajah di bawah menunjukkan suatu bulatan berpusat di O . Diberi bahawa PQR ialah segi tiga dan SRT ialah tangen kepada bulatan.

6.3 The diagram below shows a circle with centre O . Given that PQR is a triangle and SRT is a tangent to the circle.



Tandakan (✓) bagi pernyataan yang betul.
Mark (✓) for the correct statements.

[4 markah/marks]

Jawapan/Answer:

$a = b$	
$e = d$	
$c = e$	
$b + c + d = 180^\circ$	
$a + e = 180^\circ$	
$\angle ORT = 90^\circ$	

BAHAGIAN/ SECTION C

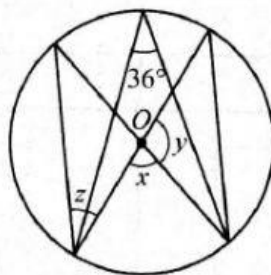
Arahan: Jawab semua soalan.

Instruction: Answer all questions.

- 14 (a)** Rajah di bawah menunjukkan suatu bulatan berpusat di O .

6.1 The diagram below shows a circle with centre O .

Modul
Habit
Gangsa



Cari nilai

Find the values of

(i) x ,

(ii) y ,

(iii) z .

[1 markah/mark]

[1 markah/mark]

[1 markah/mark]