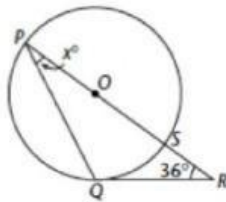


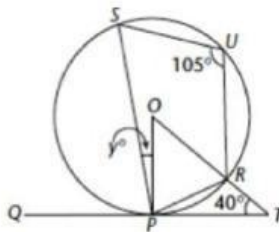
1. In the diagram below, QR is a tangent to the circle PQS with centre O , at Q . POS is a straight line.
 Dalam rajah di bawah, QR ialah tangen kepada bulatan PQS yang berpusat O , di Q . POS ialah garis lurus.



Calculate the value of x .
 Hitung nilai x .

- ☐ A 27
☐ B 36
☐ C 54
☐ D 90

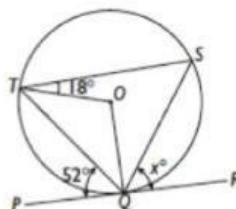
2. In the diagram below, QPT is a tangent to the circle with centre O , at P . ORT is a straight line.
 Dalam rajah di bawah, QPT ialah tangen kepada bulatan berpusat O , di P . ORT ialah garis lurus.



The value of y is
 Nilai y ialah

- ☐ A 10
☐ B 15
☐ C 50
☐ D 65

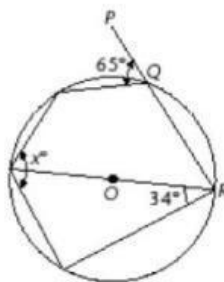
3. The diagram shows a circle QST with centre O . PQR is a tangent to the circle.
 Rajah di bawah menunjukkan sebuah bulatan QST yang berpusat O . PQR ialah tangen kepada bulatan itu.



Find the value of x .
 Cari nilai x .

- ☐ A 52
☐ B 54
☐ C 56
☐ D 57

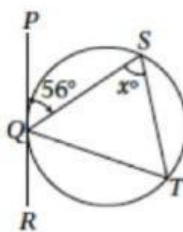
4. In the diagram, O is the centre of the circle. PQR is a straight line.
 Dalam rajah di bawah, O ialah pusat bulatan. PQR ialah garis lurus.



Find the value of x .
 Cari nilai x .

- ☐ A 65
☐ B 115
☐ C 121
☐ D 171

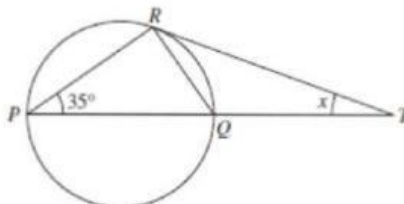
5. In the diagram below, PQR is a tangent to the circle QST at point Q .
 Dalam rajah di bawah, PQR ialah tangen kepada bulatan QST di titik Q .



The length of arc QS is equal to the length of arc ST .
 Find the value of x .
 Panjang lengkok QS sama dengan panjang lengkok ST .
 Cari nilai x .

- ☐ A 28
☐ B 34
☐ C 56
☐ D 68

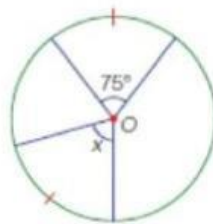
6. In the diagram, the diameter PQ is extended to T and TR is a tangent.
 Dalam rajah di bawah, diameter PQ dipanjangkan kepada titik T dan TR ialah tangen.



Find the value of x .
 Cari nilai x .

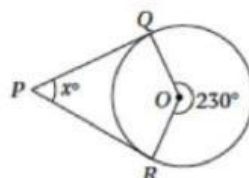
- ☐ A 20°
☐ B 35°
☐ C 45°
☐ D 60°

7. In the diagram, O is the centre of the circle. Find the value of x .
 Dalam rajah, O ialah pusat bulatan. Cari nilai x .



- ☐ A 37.5°
☐ B 42°
☐ C 75°
☐ D 85°

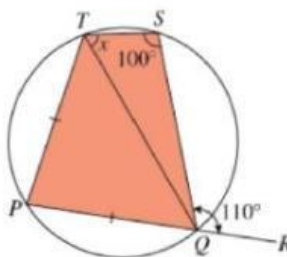
8. In the diagram below, PQ and PR are tangents to the circle with centre O .
 Dalam rajah di bawah, PQ dan PR ialah tangen kepada bulatan berpusat O .



The value of x is
 Nilai x ialah

- ☐ A 25
☐ B 50
☐ C 60
☐ D 65

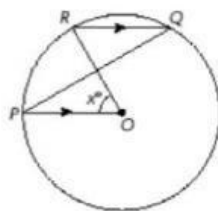
9. In the diagram, PQR is a straight line and $PT = PQ$.
 Dalam rajah di bawah, PQR ialah garis lurus dan $PT = PQ$.



Find the value of x .
 Cari nilai x .

- ☐ A 83°
☐ B 78°
☐ C 60°
☐ D 50°

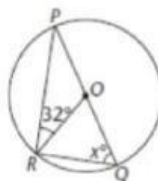
10. In the diagram, O is the centre of the circle and $\angle OPQ = 30^\circ$.
 Dalam rajah di bawah, O ialah pusat bulatan dan $\angle OPQ = 30^\circ$.



Find the value of x .
 Cari nilai x .

- ☐ A 15
☐ B 30
☐ C 45
☐ D 60

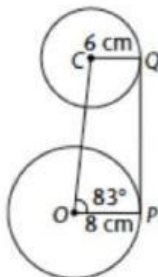
11. In the diagram, O is the centre of the circle and POQ is a straight line.
 Dalam rajah di bawah, O ialah pusat bulatan. POQ ialah garis lurus.



Find the value of x .
 Cari nilai x .

- ☐ A 29
☐ B 58
☐ C 64
☐ D 116

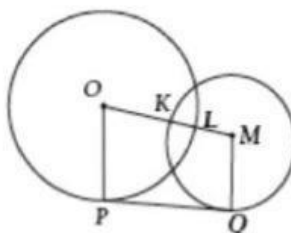
12. The diagram shows two circles with respective centres O and C .
 Rajah di bawah menunjukkan dua bulatan masing-masing berpusat O dan C .



PQ is a common tangent to the circles. Find the area, in cm^2 , of the quadrilateral $COPQ$.
 PQ ialah tangen sepunya kepada bulatan itu. Cari luas, dalam cm^2 , sisi empat $COPQ$.

- ☐ A 112.28
☐ B 114.02
☐ C 116.3
☐ D 118.8

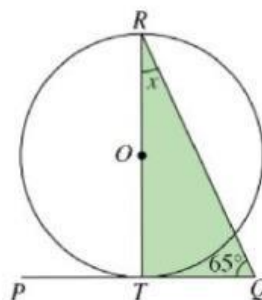
13. In the diagram below, PQ is a common tangent to the circles with centres O and M respectively.
 Dalam rajah di bawah, PQ ialah tangen sepunya kepada bulatan-bulatan yang masing-masing berpusat O dan M .



Given $OP = 9$ cm, $MQ = 8$ cm and $PQ = 10$ cm, find the length of LM , in cm.
 Diberi $OP = 9$ cm, $MQ = 8$ cm dan $PQ = 10$ cm, cari panjang LM , dalam cm.

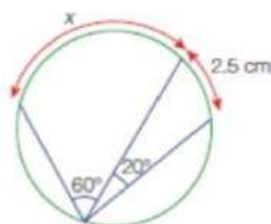
- ☐ A 1.01
☐ B 1.05
☐ C 1.07
☐ D 1.11

14. In the diagram, OT is the radius of the circle and PQ is the tangent. Find the value of x .
 Dalam rajah di bawah, OT ialah jejari bagi bulatan itu dan PQ ialah tangen. Cari nilai x .



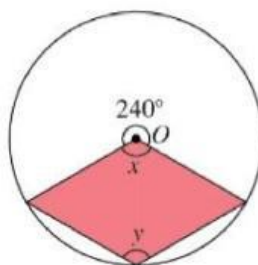
- ☐ A 55°
☐ B 35°
☐ C 25°
☐ D 45°

15. Find the value of x in the diagram.
 Cari nilai x dalam rajah.



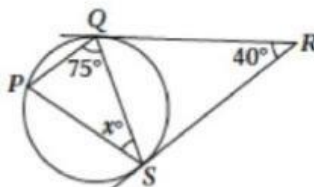
- ☐ A 7.5
☐ B 5
☐ C 4.5
☐ D 2.5

16. Given O is the centre of the circle. Which of the following are the correct values for x and y ?
 Diberi O ialah pusat bulatan. Antara berikut, yang manakah nilai yang betul bagi x dan y ?



- ☐ A $x = 100^\circ, y = 80^\circ$
☐ B $x = 120^\circ, y = 80^\circ$
☐ C $x = 120^\circ, y = 120^\circ$
☐ D $x = 80^\circ, y = 120^\circ$

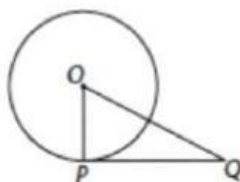
17. In the diagram below, the tangents QR and SR touch the circle PQS at point Q and point S respectively.
 Dalam rajah di bawah, tangen QR dan SR menyentuh bulatan PQS masing-masing di titik Q dan titik S .



The value of x is
 Nilai x ialah

- ☐ A 25
☐ B 30
☐ C 35
☐ D 40

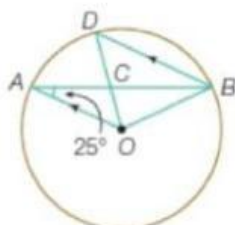
18. In the diagram below, the circle with centre O has a radius of 8 cm. PQ is a tangent to the circle.
 Dalam rajah di bawah, bulatan berpusat O mempunyai jejari 8 cm. PQ ialah tangen kepada bulatan itu.



Given $\angle POQ = 50^\circ$, find the length, in cm, of PQ .
 Diberi $\angle POQ = 50^\circ$, cari panjang, dalam cm, bagi PQ .

- ☐ A 8.24
☐ B 9.53
☐ C 9.83
☐ D 10.12

19. The diagram shows a circle with the centre O . The straight line OA is parallel to the straight line BD .
Rajah di bawah menunjukkan sebuah bulatan berpusat O . Garis lurus OA adalah selari dengan garis lurus BD .

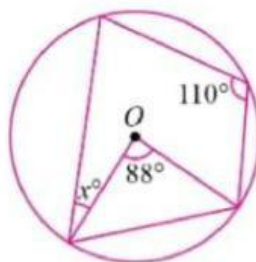


Given $\angle OAB = 25^\circ$, calculate $\angle OBA$.

Diberi $\angle OAB = 25^\circ$, hitung $\angle OBA$.

- ☐ A 12.5°
☐ B 20°
☐ C 25°
☐ D 28.5°

20. In the diagram, O is the centre of the circle.
Dalam rajah di bawah, O ialah pusat bulatan.



The value of x is
Nilai x ialah

- ☐ A 22
☐ B 24
☐ C 44
☐ D 64