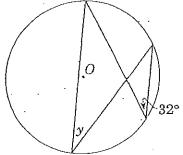


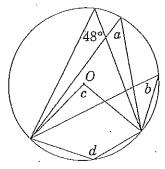
Circle geometry

Question 1 Find the value of the pronumeral(s) in each case:

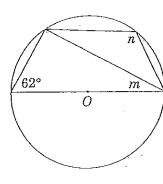
(a)



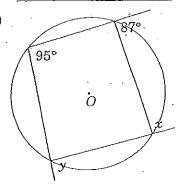
(b)



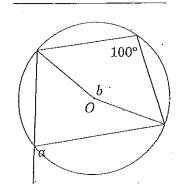
(c)



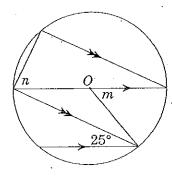
(d)



(e)



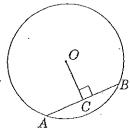
(f)



Question 2

circle.

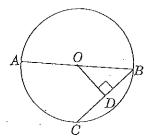
(a)



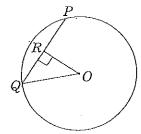
 $AB = 16 \,\mathrm{cm}$, $OC = 6 \,\mathrm{cm}$

Find the radius of the

(b)



(c)



OQ = 20 cm, OR = 16 cm Find PQ.

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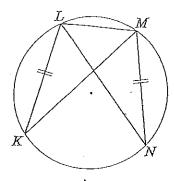
Find OD.

AB = 34 cm, BC = 30 cm

-1-

Question 3

(a)



KL = MNProve KM = LN and $\angle KLM = \angle LMN$.

P		Q R
	0	$\left\langle \cdot \right\rangle \cdot c$

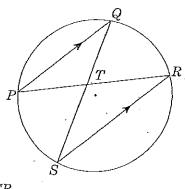
O, C are centres. $PR \parallel OC$ Prove that $PR = 2 \times OC$.

(b)

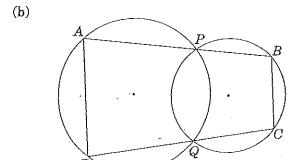
		
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Question 4

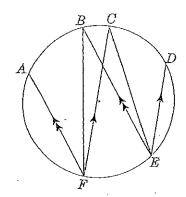
(a)



 $PQ \parallel SR$ Prove that PT = QT.



APB and DQC are straight lines. Prove $AD \parallel BC$.



 $AF \parallel BE$, $CF \parallel DE$ Prove $\angle AFB = \angle CED$.

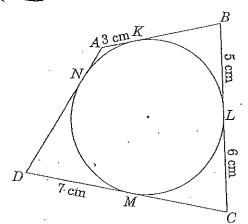
\bigwedge^{P}	
/ \	
M/	\sqrt{N}
. /	
$Q \xrightarrow{\cdot}$	$$ \setminus_R

(d)

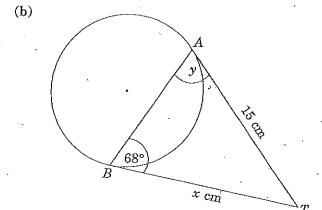
PQ = PR, $MN \parallel QR$ Prove that MNRQ is a cyclic quadrilateral.

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Question 5

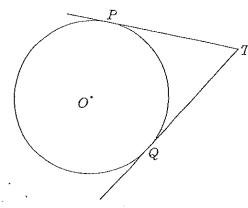


AB, BC, CD, DA are tangents. Find the perimeter of ABCD.



AT, BT are tangents. Find x and y. Question 6

(z)

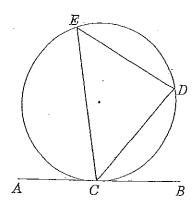


PT, QT are tangents.

Prove that OPTQ is a cyclic quadrilateral.

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(b)

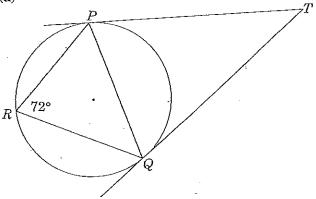


ACB is a tangent. DC bisects $\angle ECB$. Prove that DE = DC.

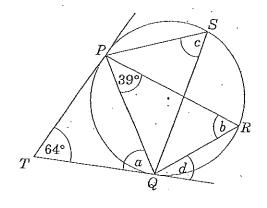
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Question 7

(a)



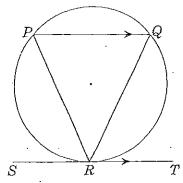
(b)



PT, QT are tangents. Find $\angle PTQ$.

juestion 8

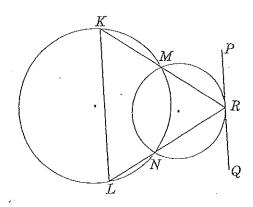
1)



-PQ ||ST|ST is a tangent.

Prove that $PR = QR$.						
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(b)

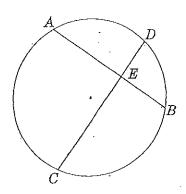


PQ is a tangent.

Prove that KL || PQ.

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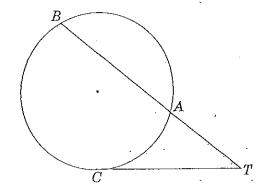
iestion 9



AE = 6 cm, EB = 4 cm, CE = 8 cm

Find CD.

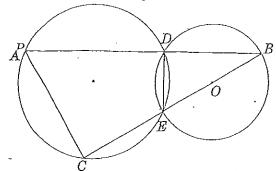
(b)



CT is a tangent. AT = 4 cm, AB = 5 cm Find CT.

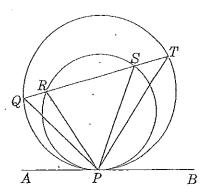
Question 10

(a)



BE is	a diamet	er of the	smalle	r circle.
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11016	. , ,	<i>J</i> <u>L</u> - 00	•	
			-	
	•			<u>:</u>
				
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			•	

(b)



AB is a tangent.

Prove that $\angle QPR = \angle SPT$.

-		

ANSWERS

33 Circle geometry

- 1 (a) 32°
 - (b) $a = 48^\circ$, $b = 48^\circ$, $c = 96^\circ$, $d = 132^\circ$
 - (c) $m = 28^{\circ}$, $n = 118^{\circ}$
 - (d) $x = 95^{\circ}$, $y = 93^{\circ}$
 - (e) $a = 100^{\circ}$, $b = 160^{\circ}$
 - (f) $m = 50^{\circ}$, $n = 65^{\circ}$
- 2 (a) 10 cm
- (b) 8 cm
- (c) 24 cm

3 and 4 Proofs

- 5 (a) 42 cm (b) x = 15 cm, $y = 68^{\circ}$
- 6 Proofs
- 7 (a) 36°.
- (b) $a = 58^{\circ}$, $b = 58^{\circ}$ $c = 58^{\circ}$, $d = 39^{\circ}$
- 8 Proofs
- 9 (a) 3 cm
- (b) 6 cm
- 10 Proofs