

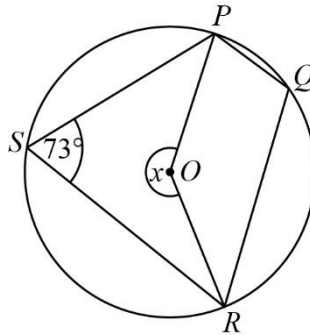
NAME \_\_\_\_\_

Time:

Non-Calculator Questions



- 1  $P, Q, R$  and  $S$  are points on the circumference of a circle, centre  $O$ .  
Angle  $PSR = 73^\circ$

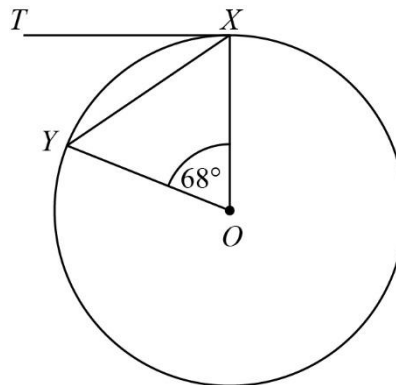


Work out the size of the angle marked  $x$ .

(2 marks)



- 3  $X$  and  $Y$  are points on the circumference of a circle, centre  $O$ .  
 $TX$  is a tangent to the circle.  
Angle  $XOY = 68^\circ$



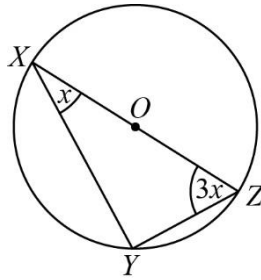
Work out the size of angle  $YXT$ .

Give reasons for each stage of your working.

(4 marks)



- 5  $XZ$  is a diameter of a circle, centre  $O$ .  
 $Y$  is a point on the circumference of the circle.

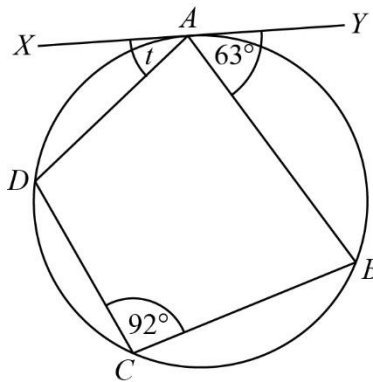


Work out the size, in degrees, of angle  $XZY$ .

(3 marks)



- 7 In the diagram,  $A$ ,  $B$ ,  $C$  and  $D$  are points on the circumference of a circle.  
 $XAY$  is a tangent to the circle.  
 Angle  $BAY = 63^\circ$   
 Angle  $BCD = 92^\circ$

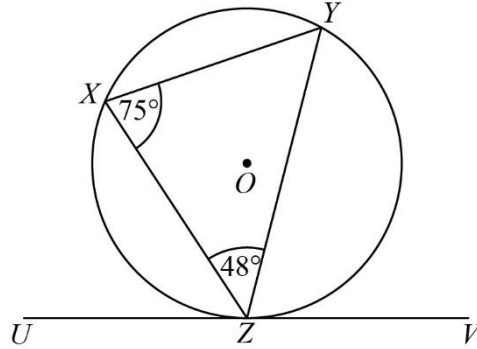


Work out the size of the angle marked  $t$ .  
 Give a reason for each stage of your working.

(3 marks)



- 9  $X, Y$  and  $Z$  are points on the circumference of a circle, centre  $O$ .  
 $UZV$  is a tangent to the circle.  
 Angle  $YXZ = 75^\circ$  and angle  $XZY = 48^\circ$



Work out the size of angle  $XZU$ .

Give reasons for each stage of your working.

(3 marks)



11  $X, Y$  and  $Z$  are points on the circumference of a circle, centre  $O$ .

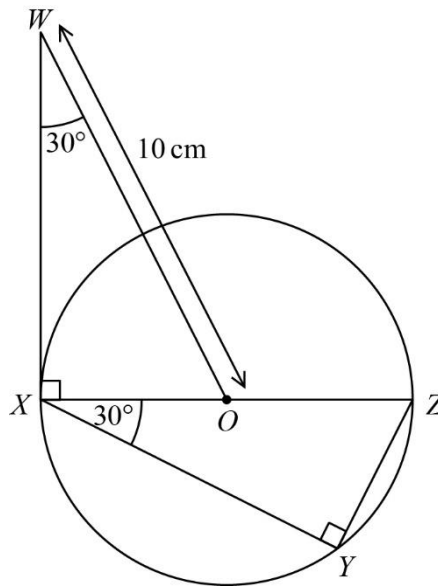
$XOZ$  is a diameter of the circle.

$WO = 10$  cm

Angle  $WXO = 90^\circ$

Angle  $OWX = 30^\circ$

Angle  $YXZ = 30^\circ$



a Explain why angle  $XYZ$  is  $90^\circ$

(1 mark)

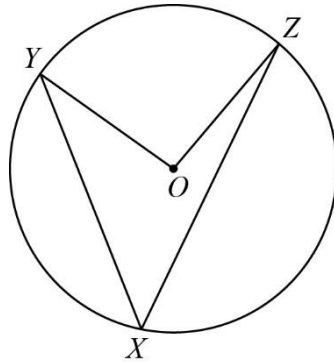
b Calculate the length  $XY$ .

Give your answer in surd form.

(4 marks)



13  $X, Y$  and  $Z$  are points on the circumference of a circle, centre  $O$ .



Prove that angle  $YOZ$  is twice the size of angle  $YXZ$ .

(4 marks)

Overall mark	/
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