

# 868



# TUTORS

*Preparation for*

## High School Mathematics Circle Theorems

Math



### Instructions and Tips:

- ✓ **You have 60 minutes to complete this worksheet**
- ✓ **This worksheet consists of 15 questions**
- ✓ **Write answers in the spaces provided**
- ✓ **All working must be clearly shown**
- ✓ **Diagrams are not drawn to scale**



Student Name: \_\_\_\_\_

Student ID: \_\_\_\_\_

Date: \_\_ / \_\_ / \_\_\_\_

**Total Score:**

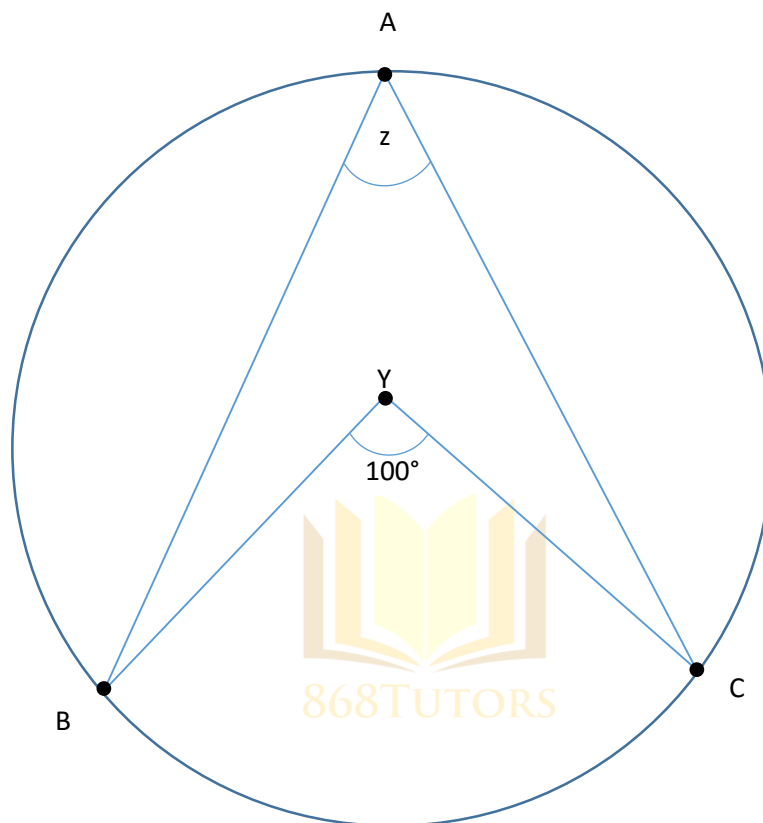
**Highest Score:**

**Tutor's Comments:**

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**Question 1**

**Consider the circle below with centre Y:**

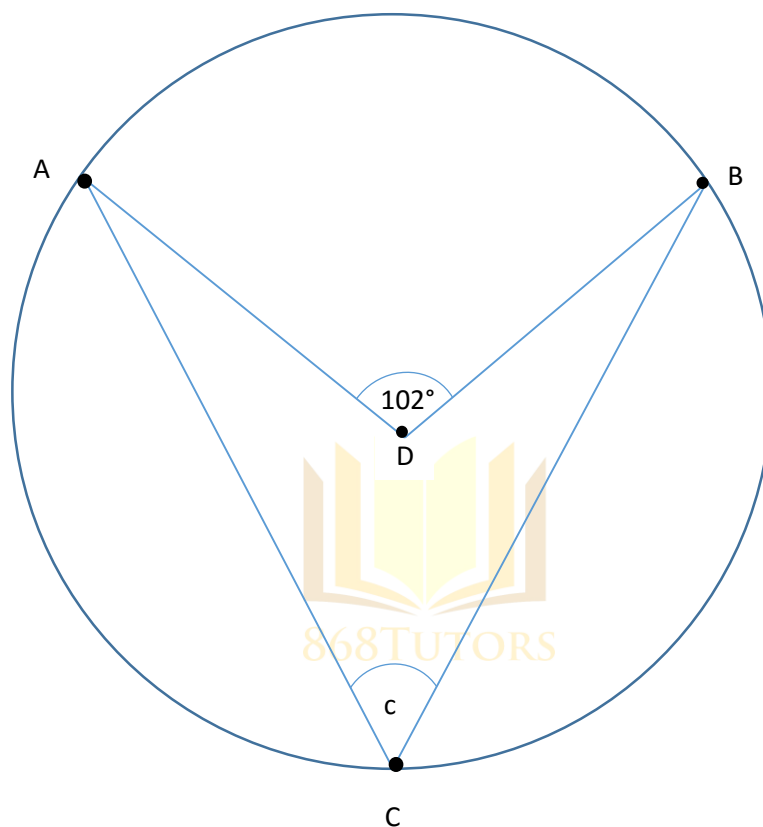


**State the value of  $z$  and give a reason for your answer.**

**(2 marks)**

**Question 2**

**Consider the circle below with centre D:**

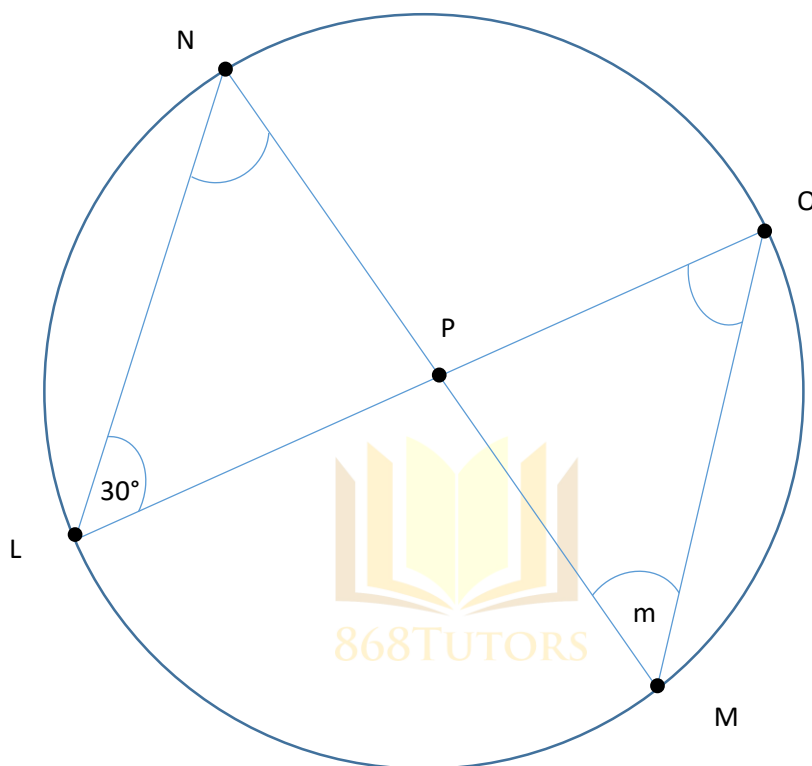


**State the value of  $c$  and give a reason for your answer.**

**(2 marks)**

**Question 3**

**Consider the circle below with centre P:**

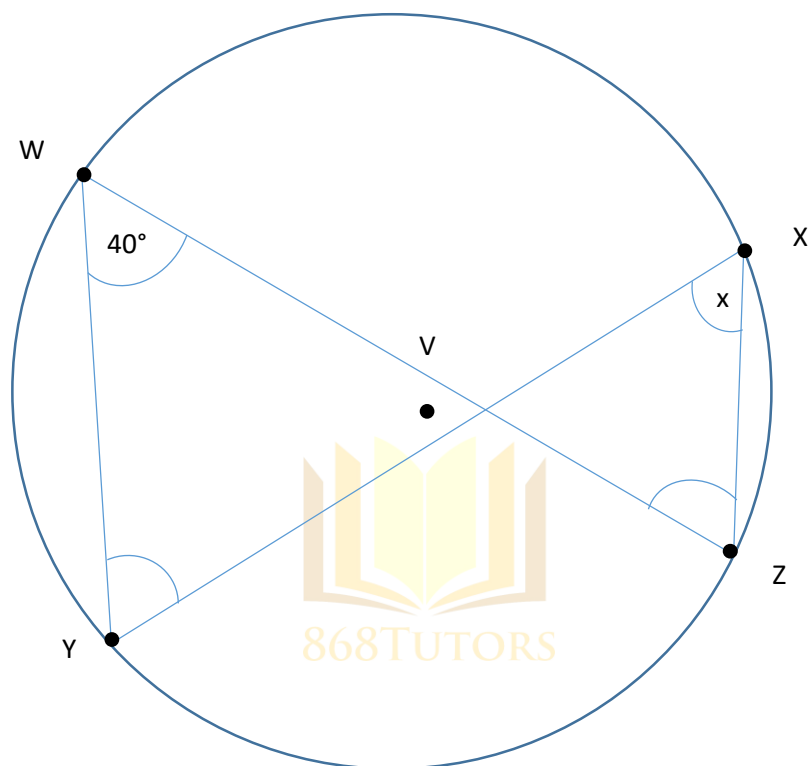


**State the value of  $m$  and give a reason for your answer.**

**(2 marks)**

**Question 4**

**Consider the circle below with centre V:**

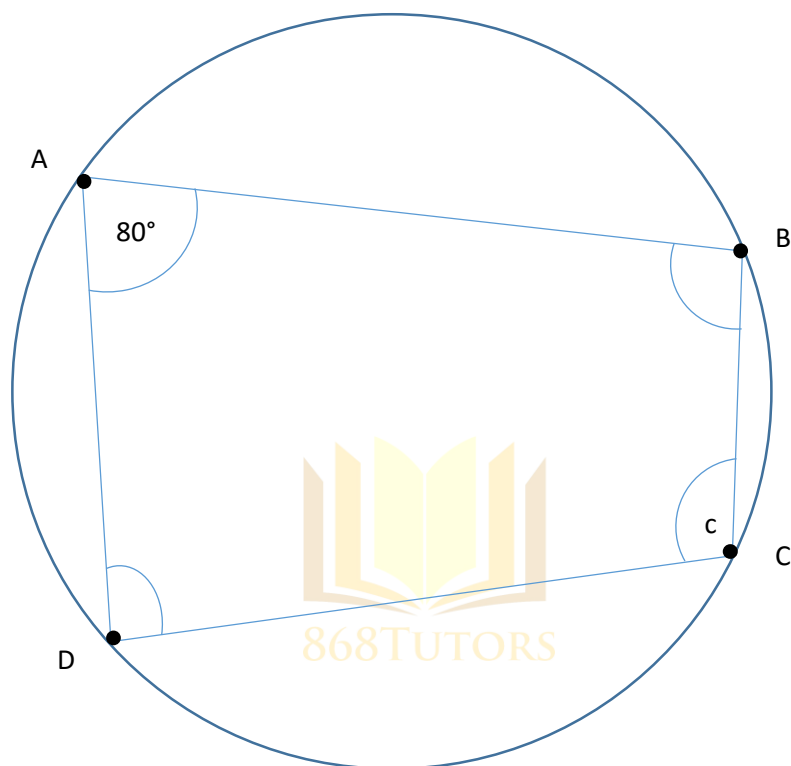


**State the value of  $x$  and give a reason for your answer.**

**(2 marks)**

**Question 5**

**Consider the circle below:**

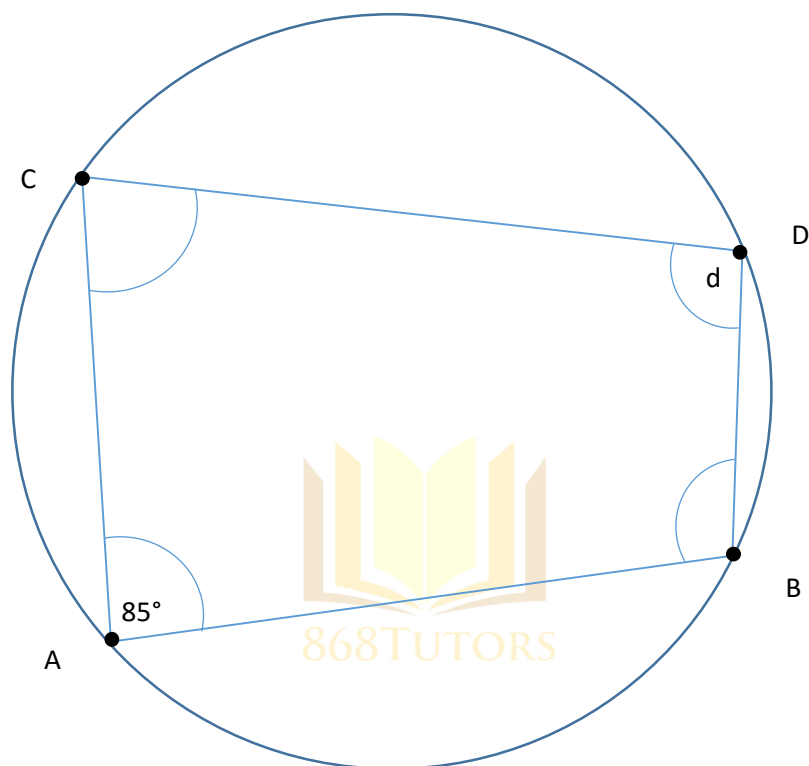


**State the value of  $c$  and give a reason for your answer.**

**(2 marks)**

**Question 6**

**Consider the circle below:**

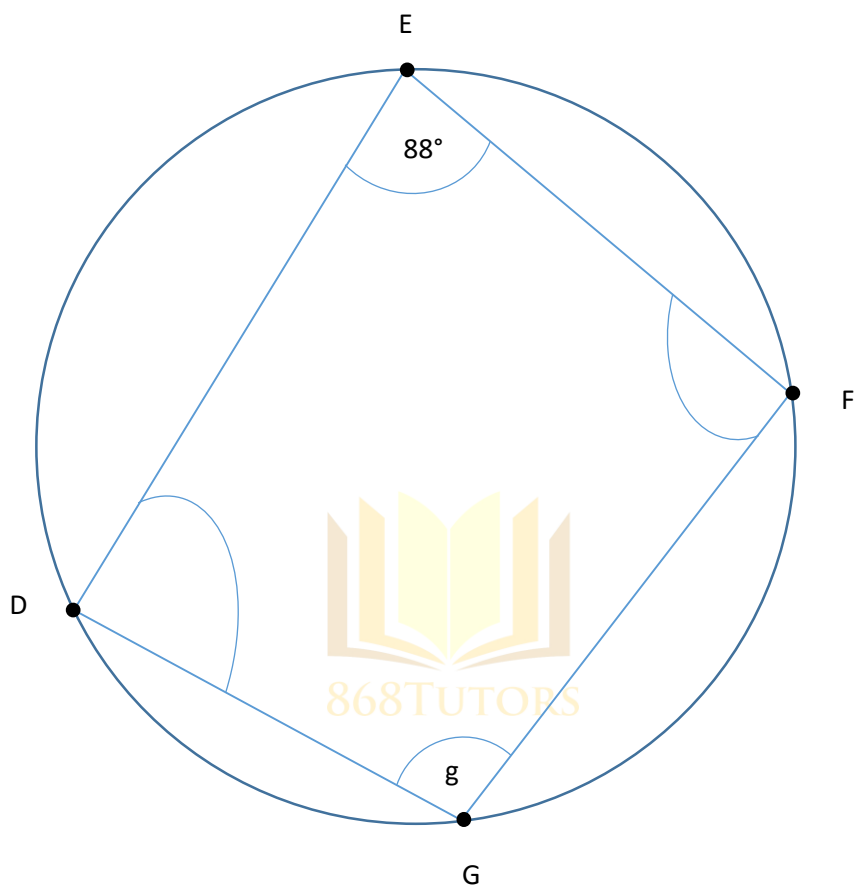


**State the value of  $d$  and give a reason for your answer.**

**(2 marks)**

**Question 7**

**Consider the circle below:**



**State the value of  $g$  and give a reason for your answer.**

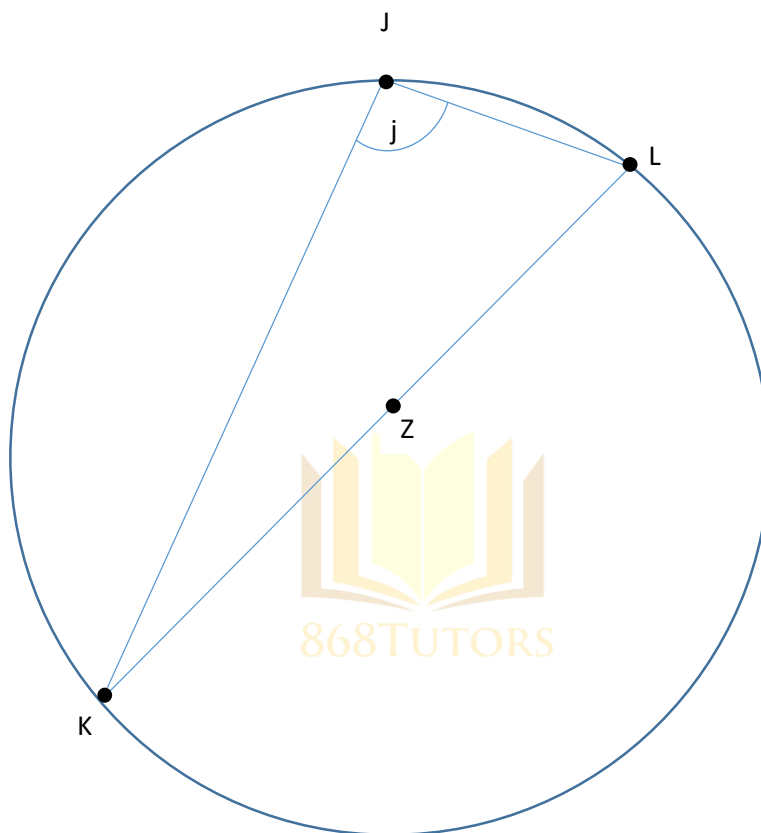
**(2 marks)**



**Question 8**

**Consider the circle below with centre Z**

**Also, KL is a diameter of the circle below**



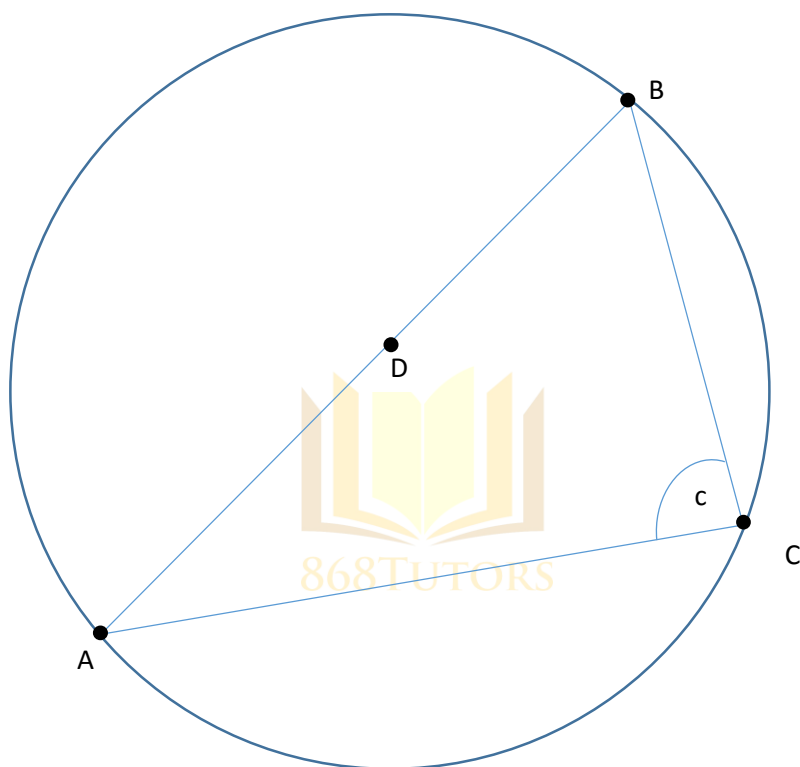
**State the value of  $j$  and give a reason for your answer.**

**(3 marks)**

**Question 9**

**Consider the circle below with centre D**

**Also, AB is a diameter of the circle below**

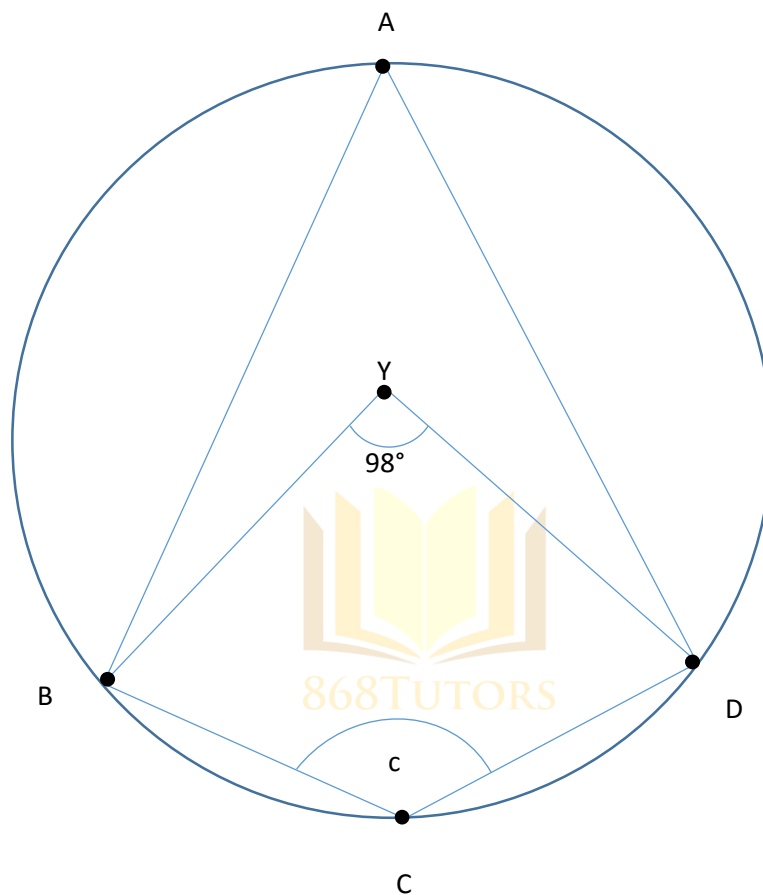


**State the value of  $c$  and give a reason for your answer.**

**(4 marks)**

**Question 10**

**Consider the circle below with centre Y:**



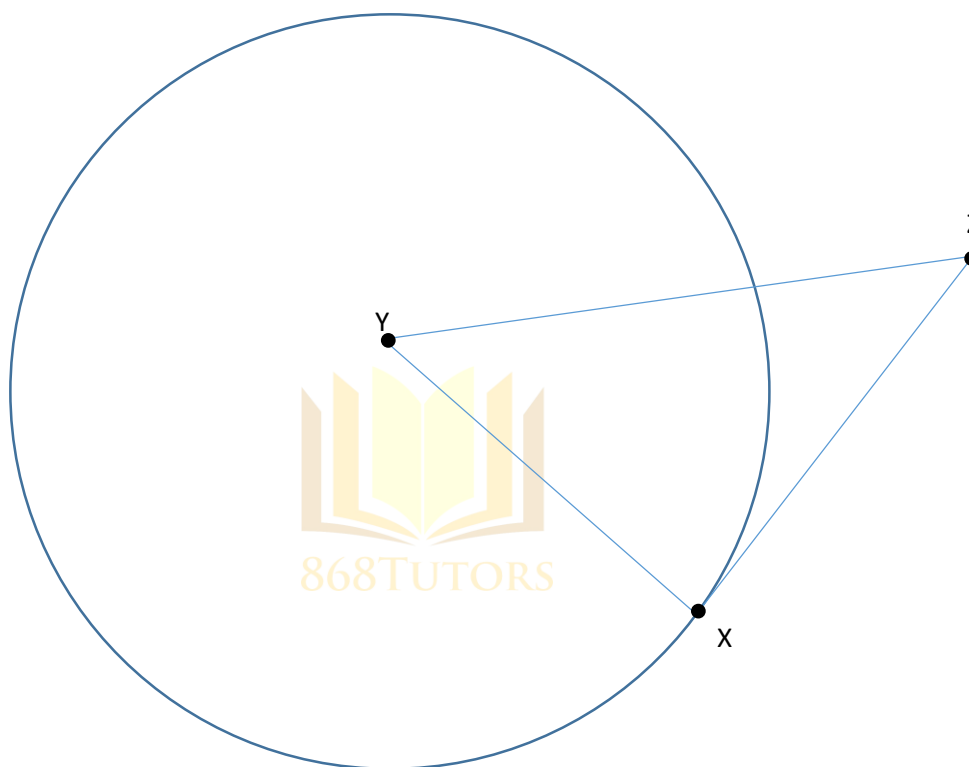
**Determine the value of  $c$  and give reasons for your answer.**

**(5 marks)**

**Question 11**

**Consider the circle below with centre Y**

**XZ is a circle tangent and XY is a circle radius**



**State the value of  $\angle YXZ$  and give a reason for your answer.**

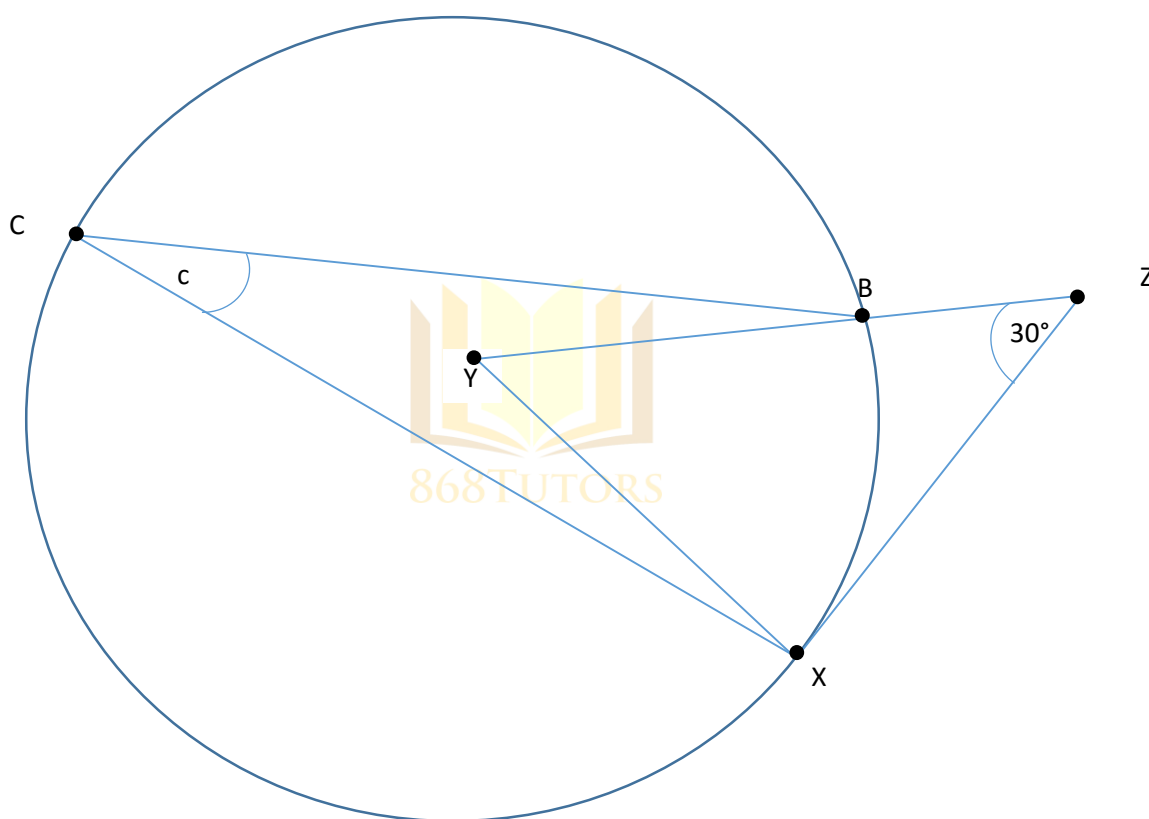
**(3 marks)**

**Question 12**

**Consider the circle below with centre Y**

**XZ is a circle tangent and XY is a circle radius**

**$\angle XZY = 30^\circ$**



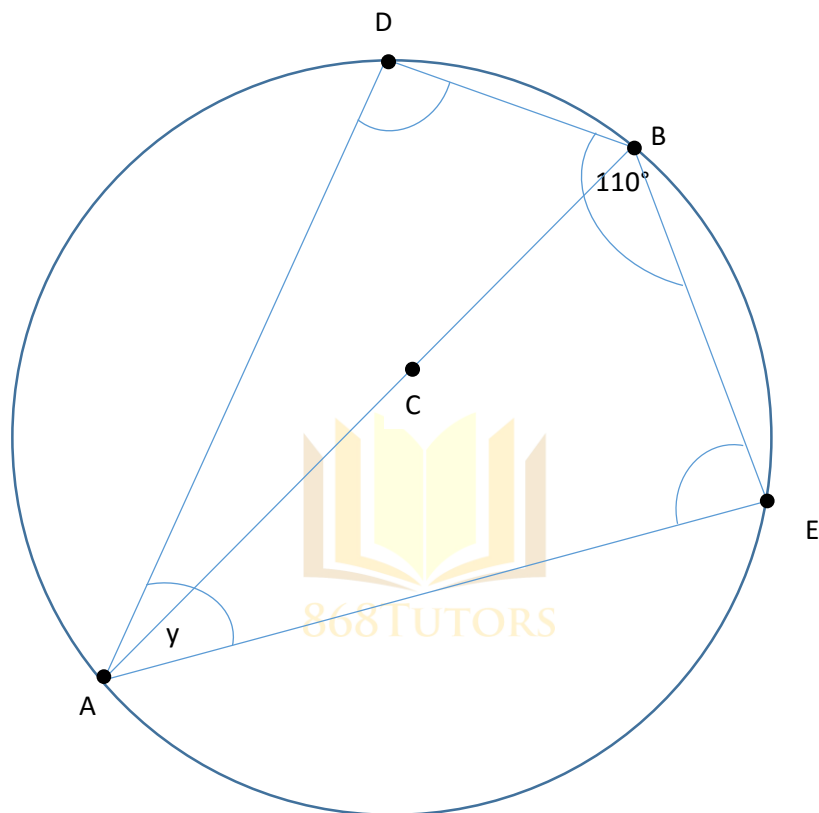
**Determine the value of  $c$  and give reasons for your answer.**

**(3 marks)**

**Question 13**

**Consider the circle below with centre C**

**Also, AB is a diameter of the circle below**

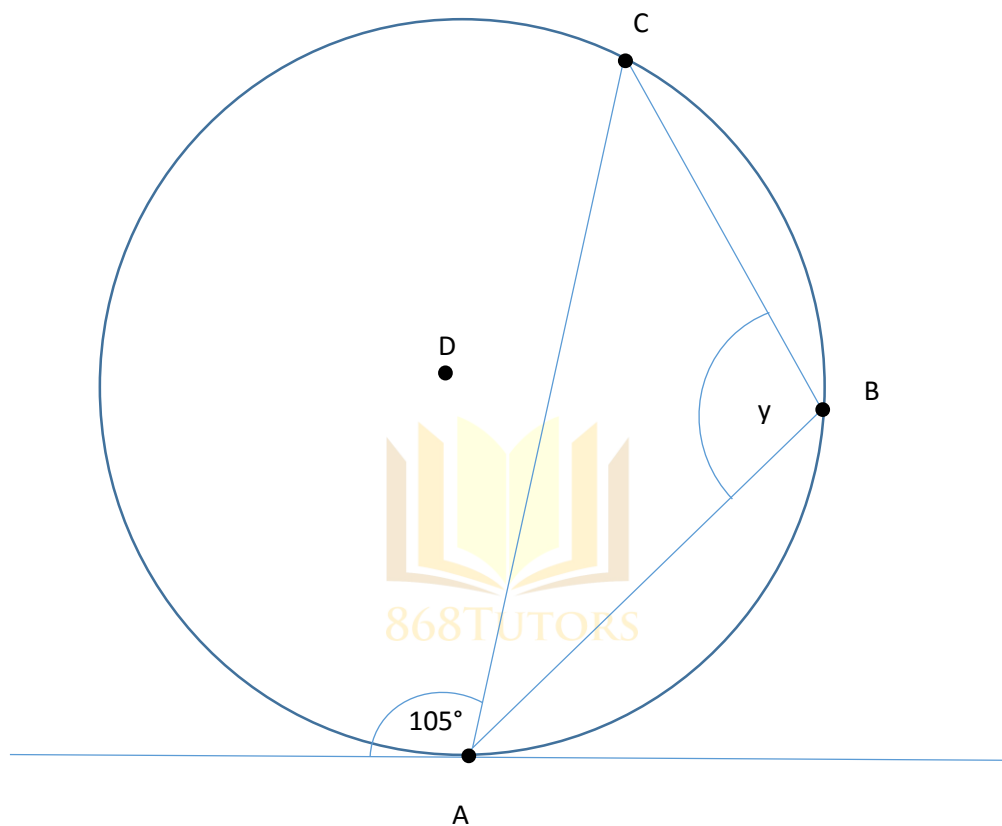


**State the value of  $y$  and give a reason for your answer.**

**(6 marks)**

**Question 14**

**Consider the circle below with centre D**



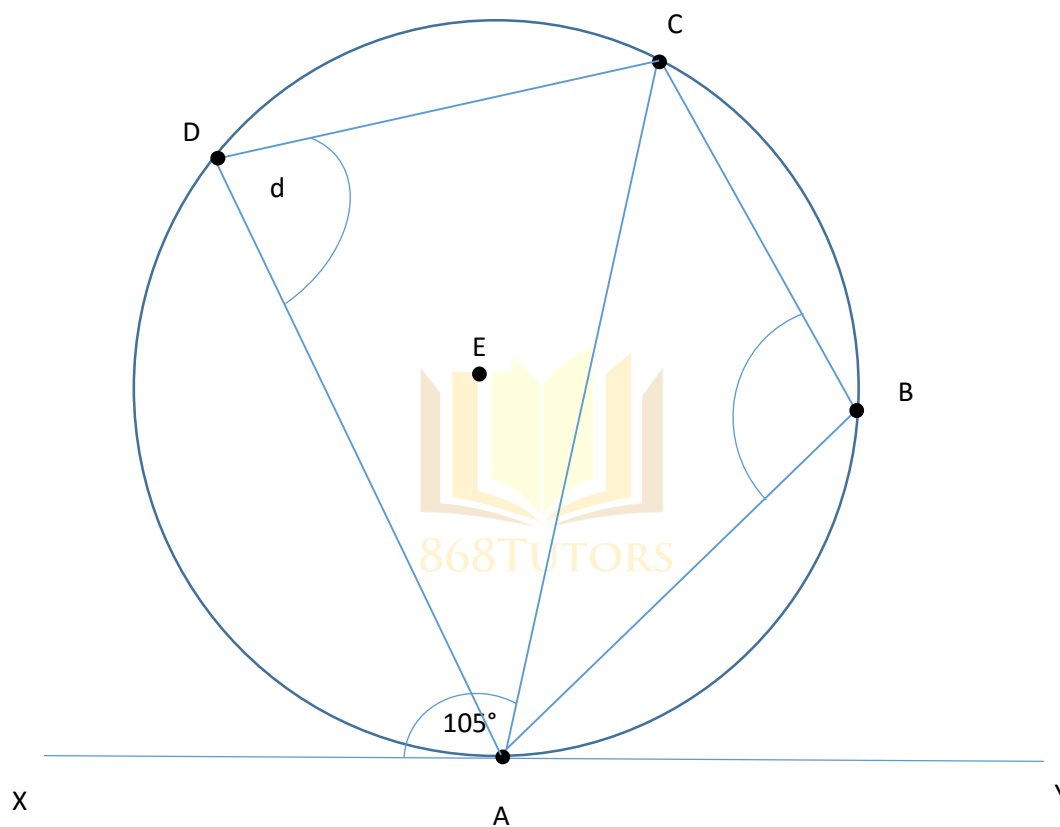
**State the value of  $y$  and give a reason for your answer.**

**(3 marks)**

**Question 15**

**Consider the circle below with centre E**

**Line XY is a straight line that is tangent to the circle at point A**



**Determine the value of  $d$  and give reasons for your answer.**

**(4 marks)**





**END OF WORKSHEET**

