



# Core Mathematics C12(GCE)

Practice Question 15

Standard A 

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**CRITICAL THINKING IS THE KEY TO SOLVE REAL WORLD PROBLEMS.  
CHILDREN MUST BE TAUGHT HOW TO THINK, NOT WHAT TO THINK.  
A GREAT TEACHER WILL BE CREATING STUDENTS TO DO NEW THINGS  
THROUGH CRITICAL THINKING, NOT SIMPLY REPEATING WHAT OTHER  
GENERATIONS HAVE DONE BEFORE. WE DO NOT NEED ANOTHER  
ALBERT EINSTEIN OR ISAAC NEWTON.... WE NEED A PERSON BETTER  
THAN THEM.**

**MR.S.V. SWARNARAJA**

# Circles

**Question:**

Given that,

$$(x - 2)^2 + (y - 4)^2 = 9$$

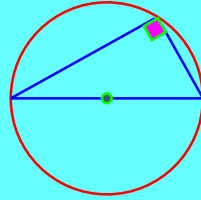
$$(x + 2)^2 + (y - 1)^2 = 64$$

Show that the above two circles are touching *internally*.

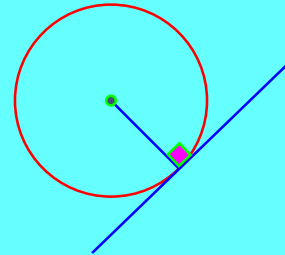
(4 marks)

# Golden Rules

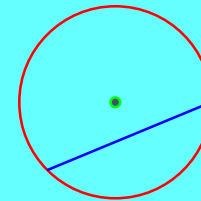
- The angle in a semicircle is a right angle.



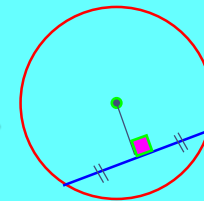
- The angle between the tangent and a radius is  $90^\circ$ .
- The tangent meets a circle at one point only.



- A chord is a line that joins two points on the circumference of a circle.

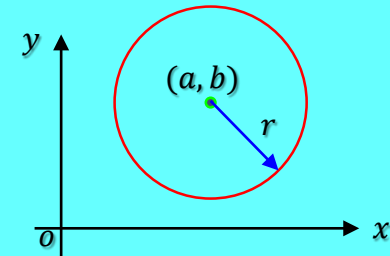


- The perpendicular from the centre of a circle to a chord bisects the chord.



- We can write the equation of a circle in the form

$(x - a)^2 + (y - b)^2 = r^2$ , where  $(a, b)$  is the centre and  $r$  is the radius.



*Traditional or Online classes*

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