ONE TWO ACADEMY

STD 10 MATHEMATICS Geometry Part - I (Ex 4.1 and 4.2)

Total:- 25 marks **Time:- 45 minutes**

Answer the following questions: **4 x 1 = 4**

1. What is the difference between secant and tangent?
2. How many tangents can be drawn from a point outside the circle ?
3. When do you say two circles touch internally?
4. State alternate segment theorem.

Answer any three of the following questions:- **3 x 2 = 6**

5. What length of ladder is needed to reach a height of 7 ft along the wall when the base of the ladder is 4 ft from the wall?

6. Find the length of the tangent drawn from a point whose distance from the centre of a circle is 5 cm and radius of the circle is 3 cm.

7. If radii of two concentric circles are 4 cm and 5 cm then find the length of the chord of one circle which is a tangent to the other circle.

8. Show that in a triangle, the medians are concurrent.

Answer any three of the following questions:- **3 x 5 = 15**

9. The hypotenuse of a right triangle is 6 m more than twice of the shortest side. If the third side is 2 m less than the hypotenuse, find the sides of the triangle.

10. Show that the angle bisectors of a triangle are concurrent.

11.P and Q are the mid-points of the sides CA and CB respectively of a $\triangle ABC$, right angled at C. Prove that $4(AQ^2 + BP^2) = 5AB^2$.

12. State and prove the “Baudhayana Theorem”.