

**MODEL ACTIVITY TASKS**  
**CLASS – X**  
**MATHEMATICS**

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**Answer the following questions :**

1. Write the condition for the roots to become equal in the equation  $ax^2 + bx + c = 0$ , ( $a, b, c$  are real,  $a \neq 0$ ).
2. The radius of a circle is 10 cm and the length of a chord is 12 cm. Then, calculate the distance between the chord and centre of the circle.
3. If the ratio of the volumes of two cubes is 1 : 8, then find the ratio of the total surface areas of the two cubes.
4. If the amount of Rs. 400/- for 2 years is 441 then find the annual rate of compound interest.
5. If  $x, 12, y, 27$  are in continued proportion then find the values of  $x$  and  $y$ .
6. AB is a radius of a circle with centre O. C is a point on the circle. If  $\angle OBC = 60^\circ$  then find the value of  $\angle OCA$ .
7. If each side of a cube increases 50% by length, then what is the percentage increase in total surface area of the cube?
8. Solve :  $(2x+1) + \frac{3}{(2x+1)} = 4, x \neq -\frac{1}{2}$

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**Students will write answers to these activity tasks in subject specific exercise books at home, and submit the exercise books to respective subject teachers after schools reopen.**  
**Under no circumstance, students will go out of home**