

MODEL ACTIVITY TASKS
CLASS – X
MATHEMATICS

1. Choose the correct answer and write it :

The total interest of a principal in n yrs. at the rate of simple interest of r % per annum is $\frac{pnr}{25}$, the principal will be

- (a) Rs. $2p$ (b) Rs. $4p$ (c) Rs. $\frac{p}{2}$ (d) Rs. $\frac{p}{4}$

Answer the following questions:

2. (i) If the height of two right circular cylinders are in the ratio $3 : 4$ and perimeters are in the ratio $1 : 2$, then find the ratio of their volumes.
(ii) AB and AC are two chords of a circle which are perpendicular to each other. If $AB = 4$ cm. and $AC = 3$ cm., then find the length of the radius of the circle.
3. If simple interest and compound interest of a certain sum of money for two years are Rs. 8400 and Rs. 8652, then find the sum of money and the rate of interest.
4. If the ratio of two roots of the quadratic equation $ax^2 + bx + c = 0 [a \neq 0]$ is $1 : r$, then show that
- $$\frac{(r+1)^2}{r} = \frac{b^2}{ac}$$
5. Prove that if any straight line passing through the centre of a circle bisects any chord, which is not a diameter, then the straight line will be perpendicular on that chord.
6. Height of a right circular cylinder is twice of its radius. If the height would be 6 times of its radius, then the volume of the cylinder would be greater by 539 cubic dcm., find the height of the cylinder.

**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.**