

⑧

$$\text{Principal (P)} = \text{Rs } 10000$$

$$\text{rate (R)} = 10\% \text{ p.a.}$$

$$\text{time (n)} = 1\frac{1}{2} \text{ years}$$

$$\text{amount} = P \left(1 + \frac{R}{100}\right)^1 \left(1 + \frac{R/2}{100}\right)^1$$

$$= 10000 \left(1 + \frac{10}{100}\right)^1 \left(1 + \frac{5}{100}\right)$$

$$= \cancel{10000} \times \frac{110}{\cancel{100}} \times \frac{105}{\cancel{100}}$$

$$= \text{Rs } 11550$$

$$\text{rate (R)} = 10\% \text{ p.a.} = 5\% \text{ h.y.}$$

$$\text{time (n)} = 1\frac{1}{2} \text{ years} = 3 \text{ half years}$$

$$\text{amount} = P \left(1 + \frac{R}{100}\right)^n$$

$$= 10000 \left(1 + \frac{5}{100}\right)^3$$

$$= \cancel{10000} \times \frac{105}{\cancel{100}} \times \frac{105}{\cancel{100}} \times \frac{105}{\cancel{100}}$$

$$= \text{Rs } 11576.25$$

Compound Interest = Amount - Principal

$$= 11576.25 - 10000$$

$$= 1576.25$$

Interest is more when calculated
half yearly by = $11576.25 - 11550$

$$= \text{Rs } 26.25$$