

Simple Interest Aptitude Problems with Solutions Pdf

1. Rs. 6000 becomes Rs. 7200 in 4 years at a certain rate of simple interest. If the rate becomes 1.5 times of itself, the amount of the same principal in 5 years will be

- a. Rs. 8000
- b. Rs. 8250
- c. Rs. 9000
- d. Rs. 9250

Ans: B

$$P = ₹ 6000, S.I. = ₹ (7200 - 6000) = ₹ 1200, T = 4 \text{ yrs.}$$

$$\therefore \text{Rate} = \left(\frac{100 \times 1200}{6000 \times 4} \right) \% = 5\%.$$

$$\text{New rate} = (1.5 \times 5)\% = 7.5\%.$$

$$\text{New S.I.} = ₹ \left(\frac{6000 \times 7.5 \times 5}{100} \right) = ₹ 2250.$$

$$\therefore \text{New amount} = ₹ (6000 + 2250) = ₹ 8250.$$

2. Sujitha invested Rs. 7500 at simple interest @ 11 p.c.p.a. She further invested some amount at simple interest @ 15 p.c.p.a. Total interest earned at the end of the year became 12 p.c.p.a. Find the amount invested at the rate of 15 p.c.p.a.

- a. Rs. 2000
- b. Rs. 2500
- c. Rs. 3000
- d. Rs. 3500

Ans: B

Let the required sum be ₹ x .

Then, 11% of 7500 + 15% of x = 12% of $(7500 + x)$

$$\Rightarrow \left(\frac{11}{100} \times 7500 \right) + \left(\frac{15}{100} x \right) = \frac{12}{100} (7500 + x)$$

$$\Rightarrow 82500 + 15x = 90000 + 12x \Rightarrow 3x = 7500$$

$$\Rightarrow x = 2500.$$

Hence, required sum = ₹ 2500.

3. At what rate percent of simple interest will a sum of money double itself in 12 years?

(a) $8\frac{1}{4}\%$

(b) $8\frac{1}{3}\%$

(c) $8\frac{1}{2}\%$

(d) $9\frac{1}{2}\%$

Ans: B

meritnotes.com

Let sum = ₹ x . Then, S.I. = ₹ x .

$$\therefore \text{Rate} = \left(\frac{100 \times \text{S.I.}}{P \times T} \right) = \left(\frac{100 \times x}{x \times 12} \right) \% = \frac{25}{3} \% = 8\frac{1}{3}\%.$$

4. At the rate of $8\frac{1}{2}\%$ p.a. simple interest, a sum of Rs.4800 will earn how much interest in 2 years 3 months?

a. Rs. 796

b. Rs. 816

c. Rs. 918

d. Rs. 956

Ans: C

$$P = ₹ 4800, R = 8\frac{1}{2}\% = \frac{17}{2}\%,$$

$$T = 2 \text{ yrs } 3 \text{ mths} = 2\frac{1}{4} \text{ yrs} = \frac{9}{4} \text{ yrs.}$$

$$\therefore \text{S.I.} = ₹ \left(4800 \times \frac{17}{2} \times \frac{9}{4} \times \frac{1}{100} \right) = ₹ 918.$$

5. Rs. 1000 is invested at 5% per annum simple interest. If the interest is added to the principal after every 10 years, the amount will become Rs. 2000 after

- a. 15 years
- b. $16\frac{2}{3}$ years
- c. 18 years
- d. 20 years

Ans: B

$$\text{Amount after 10 years} = ₹ \left[1000 + \frac{1000 \times 5 \times 10}{100} \right] = ₹ 1500.$$

$$\text{Now, S.I.} = ₹ (2000 - 1500) = ₹ 500, P = ₹ 1500, R = 5\%.$$

$$\therefore \text{Time} = \left(\frac{500 \times 100}{1500 \times 5} \right) \text{ yrs} = 6\frac{2}{3} \text{ yrs.}$$

$$\text{Hence, required time} = \left(10 + 6\frac{2}{3} \right) \text{ yrs} = 16\frac{2}{3} \text{ yrs.}$$