

Simple Interest and Compound Interest

$$\frac{4}{12} \times 10 = \frac{\text{S.I.}}{730} \times 100$$

$$\frac{73}{10} \times 10 \times \frac{1}{3} = \text{S.I.}$$

7. 37.50

$$T = (24 + 31 + 18) \text{ days} = 73 \text{ days} = \frac{73}{365} = \frac{1}{5} \text{ yr.}$$

$$\frac{1}{5} \times \frac{25}{4} = \frac{\text{S.I.}}{3000} \times 100$$

$$\frac{5}{4} \times 30 = \text{S.I.}$$

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#2

Find the following:

1. P = Rs. 100, R = 3% per annum, T = 2 year, A = ?
2. P = Rs. 500, R = 6% per annum, T = 4 months, A = ?
3. P = Rs. 400, R = 3.65% per annum, T = 150 days, A = ?
4. A = Rs. 540, S.I = Rs. 108, R = 5%, T = ?
5. A = Rs. 1,120, R = 5%, T = $2\frac{2}{5}$ yr, S.I = ?

Solution:

1. S.I = 6 ; A = S.I + principal ; A = 6 + 100 = 106

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5. 120

Method I	Method II
$\frac{12}{5} \times 5 = \frac{S.I.}{x} \times 100$	$\frac{A}{P} = \left(1 + \frac{RT}{100}\right)$
$\frac{12x}{100} = S.I.$	$540 = 208 \left(1 + \frac{100}{RT}\right)$
$A = S.I. + P$	$\Rightarrow \frac{1120}{S.I.} = \frac{112}{12}$
$A = \frac{12x}{100} + x$	
$1120 = \frac{112x}{100}$	
$1000 = x$	
$S.I. = A - P$	
$S.I. = 1120 - 1000 \Rightarrow 120$	

#3

1. A sum of money lent out at simple interest amounts to Rs. 720 after 2 years and to Rs. 1020 after a further period of 5 years. Find the sum and the rate %.
2. Adam borrowed some money at the rate of 6% p.a. for the first two years, at the rate of 9% p.a. for the next three years, and at the rate of 14% p.a. for the period beyond five years. If he pays a total interest of Rs. 11,400 at the end of nine years, how much money did he borrow ?(Bank P.O 1999)