

Simple Interest

Simple Interest: If a person (who is called as borrower) takes money (loan) from another person or a bank (Who gives called as lender), then the borrower pays some extra money to lender.

The additional money paid by the borrower to the lender for having used his (her) money is called Interest. Interest may be classified in two types as

1. Simple interest
2. Compound interest

Simple Interest If the interest on a certain sum borrowed for a certain period is calculated uniformly, then it is called simple interest.

Or

In SI, the interest is calculated only on principal borrowed.

Or

In SI, the principal to calculate the interest remains constant throughout the time period.

$$SI = \frac{P \times T \times R}{100}$$

Where,

SI-Simple Interest

P-Principal,

R- Rate

T-Time Period

PRINCIPAL:

The amount of loan (or) borrowing involved in the transaction is called the Principal: and it is denoted by (P).

AMOUNT:

When the Interest is added to a specific period to Principal

Amount (A)- Principal + Simple Interest

TIME PERIOD:

The Time or Interval for which principal is borrowed is known as time period and it is denoted by (T):

RATE OF INTEREST:

The Interest is calculated as 'per cent per year' or 'percent per annum'. This rule of borrowing or lending is known as rate of Interest and it is denoted by (R),

E g: Rate of Interest is 5% per annum means, that on the principal of Rs. 100, Rs. 5 per year are to be paid extra.

1) if T is the time given in months or days first convert it into years and then use formulae.

2) The Interest is calculated on the original principal Le The principal to calculate the Interest it remains constant through-out the time period. The Interest earned on the principal is not taken into account for the purpose of calculating interest for later year.

Important Formulae

$$1) \text{ Simple Interest (S.I.)} = \frac{P \times T \times R}{100}$$

$$2) \text{ Principal (P)} = \frac{S.I \times 100}{R \times T}$$

$$3) \text{ Time (T)} = \frac{S.I \times 100}{P \times R}$$

$$4) \text{ Rate (R)} = \frac{S.I \times 100}{P \times T}$$

$$5) \text{ Amount (A)} = P + S.I.$$

$$6) SI = A - P$$

$$7) P = A - SI$$

EXERCISE

Choose the correct answer. Encircle the number that shows the correct answer.

1. A man lends Rs. 500 for 4 years and Rs. 600 for 3 years at a certain rate of simple interest.

If he gets a total Rs. 190 as Interest in both cases the percent, per annum is

- a) 8% b) 5% c) 10% d) 4%

2. A man will get Rs. 87 as simple interest on Rs. 725 at 4% per annum in

- a) 3 years b) 4 years c) $3\frac{1}{2}$ years d) 5 years

3. After what time will the sum of Rs. 2000 become Rs. 2240 at 4% per annum simple interest?

- a) 3 years b) 5 years c) 2 years d) 4 years

4 Which of the following sum of money will amount to Rs. 1050 in 5 years at 8% per annum simple interest?

- a) Rs. 750 b) Rs. 825 c) Rs. 775 d) Rs. 730

5. A certain sum of money lent out on simple interest amount to Rs. 1760 in 2 years and to Rs. 2000 in 5 years. Find the sum.

- a) 1600 b) 1560 c) 1700 d) 1800

6 A sum of money doubles itself in 20 yrs. In how many years will it triple itself at the same rate of simple interest?

- a) 30 yrs b) 50 yrs c) 40 yrs d) 45 yrs

7. A invested Rs. 5000 at a certain rate of simple interest and Rs. 4000 at 1% higher rate of interest. If the interest in both cases is same the former rate of interest is

- a) 3% b) 4% c) 6% d) 5%

& The simple interest on Rs. 500 for 6 years at 5% pa. is

- a) Rs. 250 b) Rs. 150 c) Rs. 140 d) Rs. 120

9. If the simple interest on Rs. 500 for 4 years in Rs. 40 the rate of interest is

- a) 32% b) 2% c) 214% d) 3%

10. If the SI on a certain amount of money at 6% p.a. for 3 years is Rs. 90, the sum will be

- a) Rs. 500 b) Rs. 525 c) Rs. 450 d) Rs. 560

11. Girish lent some money to at 5% P.A. simple interest. Girish lent the same amount to Om on the same day at 8% per annum. In this transaction after a year Rs. profit 350 earned. Find the sum of money lent by Girish to Rajesh.

- a) Rs. 10,000 b) Rs. 9,500 c) Rs. 8,000 d) Rs. 10,500

12. A and B borrowed on equal amount of money from a money lender at rate of 8% and 5 % PA. respectively. If to clear the debt after 4 years A paid Rs. 550 more than B, then the total amount taken by them is

- a) Rs. 12,500 b) Rs. 11,500 c) Rs. 11,000 d) Rs. 10,500

13. The Si on a sum is Rs. 144. If rate per cent of the interest PA, equals, then the No. of yrs. the rate percent P.A. is

- a) 10% b) 12% c) 15% d) 8%

14. If St on a certain amount for 4 yrs @5% pa. is same as the SI is Rs. 840 for 10 years at the rate of 4% pa, the sum is

- a) 1780 b) 1660 c) 1680 d) 1620

15. The SI of Rs. 800 is Rs. 216 If the rate per 1 cent of Interest pa. is $\frac{1}{3}$ of the no.of years, then the rate per Anum is

- a) 2% b) 4% c) 65 d).3%

16. If a certain sum lent out at SI amounted Rs. 368 in 3 yrs, and there after Rs. 400 in another 2 years, the sum lent is

- a) 300 b) 320 c) 290 d) 325

17. A sum of money amounts to Rs. 1150 in 3 yrs and to Rs. 1250 in 5 yrs. at certain rate per cent P.A .S.I. The rate percent PA will be

- a) 5% b) 8% c) 7% d) 6%

18. If a certain money at SI amount Rs. 1900 in 3yrs and Rs. 2050 is 5 years. The rate percent P.A. is

- a) 44% b) 35% c) 25% d) 5%

19. If the SI on Amount at 6% P.A. for 4 yrs is Rs. 81. The sum will be

- a) Rs. 325 b) Rs. 225 c) Rs. 300 d) Rs. 340

20. If S.I. on a sum of money for 5 years, of the sum, the rate percent PA is

a) 5%

b) 8%

c) 4%

d) 10%