Simple Interest and Compound Interest

Principal

The money borrowed or lent out for a certain period is called the principal or the sum.

Interest

Extra money paid for using other's money is called **interest.**

Simple Interest

If the interest on a sum borrowed for certain period is reckoned uniformly, then it is called **simple interest.**

If P= Rs.1000, R=10% p.a. T=3 years. Find Simple Interest for 3 years.

Let Principal = P, Rate = R% per annum (p.a.) and Time = T years. Then

Simple Interest =(P x R x T)/100

Question: Reena took a loan of Rs. 1200 with simple interest for as many years as the rate of interest. If she paid Rs. 432 as interest at the end of the loan period, what was the rate of interest?

[A] 3.6

[B] 6

[C] 18

[D] Can not be determined

Question: A man took loan from a bank at the rate of 12% p.a. simple interest. After 3 years he had to pay Rs. 5400 interest only for the period. The principal amount borrowed by him was:

[A] Rs.2000

[B] Rs.10000

[C] Rs.15000

[D] Rs.20000

Question: How much time will it take for an amount of Rs. 450 to yield Rs. 81 as interest at 4.5% per annum of simple interest?

[A] 3.5 years

[B] 4 years

[C] 4.5 years

[D] 5 years

Question: The interest for the 3rd year on a certain sum at a certain rate of simple interest is Rs.3000. find the sum of the interests accrued on it in the 6th, 7th and 8th years.

[A] Rs.6000

[B] Rs.9000

[C] Rs.4500

[D] Rs.12000

Question: A sum was invest for 2 years. It will give Rs. 300 more, if invested at 3% higher rate. Find the sum.

[A] Rs.4000

[B] Rs.5000

[C] Rs.6000

[D] Rs.10000

Question: A sum amounts to Rs.1008 in 2 years and amounts to Rs.1112 in 3 years at SI. Find the sum and rate of interest per annum.

[A] Rs.800, 13% pa

[B] Rs.600, 12 % pa

[C] Rs.800, 12% pa

[D] Rs.600, 13% pa

Question: S.I. On Rs 400 for 5 years together with that on Rs. 600, for 4 year to Rs. 132. If the Rate is same in both the case. Find rate % of interest?

[A] 2% pa

[B] 3% pa

[C] 5% pa

[D] 8% pa

Question: A shopkeeper borrow Rs. 20,000 from two money lenders. For one loan, he paid 12% pa and for other 14% pa. After one year he paid Rs. 2560 as total interest. How much did he borrow each?

[A] Rs.8000, Rs.12000

[B] Rs.12000, Rs.8000

[C] Rs.6000, Rs.14000

[D] Rs.14000, Rs.6000

Question: Rs. 1500 is invested in two such parts that if one part be invested at 6% and other at 5%, S.I= Rs. 85 for one year. Then how much was invested at 5%?

[A] Rs.1000

[B] Rs.500

[C] Rs.600

[D] Rs.800

Question: Rs. 8400 is invested in two such parts that if one part be invested at 8% and remaining at $\mathbf{6\frac{2}{3}}$ % pa, his total interest after one and half year was Rs. 882. Then how much invested at different rates?

[A] Rs.6300, Rs.2100

[B] Rs.6000, Rs.2400

[C] Rs.2400, Rs.6000

[D] Rs.2100, Rs.6300

Question: Rs. 950 is lend in two ways. The rate of S.I given on one part is 6% and on other part is 4%. If the S.I of 5 years is Rs. 200 then how much is given on 6%?

[A] Rs.500

[B] Rs.400

[C] Rs.200

[D] Rs.100

Question: If a sum of money at simple interest doubles in 6 years, it will become 4 times in:

[A] 12 years

[B] 14 years

[C] 16 years

[D] 18 years

Question: If a sum of money at simple interest doubles in 8 years, it will become 4 times in:

[A] 16 years

[B] 24 years

[C] 64 years

[D] 32 years

Question: Find the present value (in Rs.) of Rs.3000 due after 5 years at 10% p.a. simple interest.

[A] Rs.1500

[B] Rs.1800

[C] Rs.2000

[D] Rs.2500

Compound interest

If P= Rs.1000, R=10% p.a. T=3 years. Find Compound Interest for 3 years.

Compound Interest:

Compound interest is the interest earned not only on the original principal, but also on all interests earned previously

Let Principal = P, Rate = R% per annum, Time = *n* years.

1. When interest is compounded Annually:
Amount= P(1+R/100)^n

2. When interest is compounded Half-yearly:
Amount=P[1+(R/2)/100]^2n

3. **When interest is compounded Quarterly:**
Amount=P[1+(R/4)/100]^4n

$$C.I - S.I \text{ for } 2 \text{ years} = P\left(\frac{R}{100}\right)^2$$

$$C.I - S.I \text{ for } 3 \text{ years} = P\left(\frac{R}{100}\right)^2\left(\frac{R}{100} + 3\right)$$

Question: Find the compound interest earned on Rs.20000 for 2 years at 10% p.a. the interest being compounded annually.

[A] Rs.2100

[B] Rs.4200

[C] Rs.6300

[D] Rs.5600

Question: Find the interest earned in the first year on Rs.400 at 20%p.a. compound interest, the interest being compounded half yearly.

[A] Rs.42

[B] Rs.72

[C] Rs.84

[D] Rs.144

Question: Find CI. If P= Rs. 10000, r = 10 % p.a. and T= 1 year and 73 days.

[A] Rs.2220

[B] Rs.3200

[C] Rs.2120

[D] Rs.1220

Question: Find CI. If P= Rs. 10000, r = 10 % p.a. and T= $\mathbf{2\frac{3}{5}}$ year.

[A] Rs.2226

[B] Rs.826

[C] Rs.2628

[D] Rs.2826

Question: Find C.I. on Rs. 8000, 20% P.A. For 9 month compounded quarterly.

[A] Rs.262

[B] Rs.1261

[C] Rs.9261

[D] Rs.831

Question: If Rs.2000 amounts to Rs.2880 in 2 years at compound interest, what is the rate of interest per annum if the interest is being compounded annually?

[A] 10%

[B] 20%

[C] 15%

[D] 25%

Question: What will be the difference between the S.I and C.I. On Rs. 600 for one year at 10% P.A, if compounded half yearly.

[A] Rs.1.5

[B] Rs.15

[C] Rs.3.5

[D] Rs.35

Question: A sum of money lent at C.I. For two years at 20% pa give Rs. 723 more if the interest was half year in place of annually. The sum is.

[A] 30000

[B] 60000

[C] 40000

[D] 20000

Question: If the S.I of certain money for 3 years is Rs. 225 & C.I on same money, same rate for 2 years is Rs. 153. then what was the principal amount?

[A] Rs.875

[B] Rs.1875

[C] Rs.785

[D] Rs.1785

Question: If the difference between S.I and C.I at 4% P.A for 2 years is 20 Rs. What will be the value of principle amount?

[A] Rs.50000

[B] Rs.12000

[C] Rs.12500

[D] Rs.25000

Question: The difference between C.I and S.I at the some rate for Rs. 5000 for 2 years is Rs. 72. what is the rate of interest per annum?

[A] 6% pa

[B] 10% pa

[C] 12% pa

[D] 15% pa

Question: Divide Rs. 6100 between A & B, so that A's share at the end of 3 year = B's share at end of 5 year. C.I. Rate =20% pa.

[A] 3600, 2500

[B] 2000, 4100

[C] 2500, 3600

[D] 4100, 2000

Question: A sum doubles in 8 years at compound interest. In how many years will the sum become 4 times the original sum if the interest is compounded annually?

[A] 16 years

[B] 24 years

[C] 64 years

[D] 32 years

Question: A sum of money under compound interest doubles itself in 4 years. In how many years will it become 16 times itself?

[A] 12 years

[B] 16 years

[C] 8 years

[D] None of these

Question: The difference between the compound interest and simple interest on a certain sum at 12% per annum for 2 years is Rs.126.72. Find the sum.

[A] Rs.8000

[B] Rs.8800

[C] Rs.10200

[D] Rs.12400


return
Thank You!