



MATHS

BOOKS - S CHAND IIT JEE

FOUNDATION

SIMPLE INTEREST

Solved Examples

1. Mr. Abhishek borrowed Rs. 600 and returned Rs. 856.60 at the end of 9 years and 6 months.

What was the interest per annum he paid at simple interest ?



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2. A certain sum is invested on simple interest. If it triples in 10 years, what is the rate of interest ?



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3. Two equal sums of money were invested, one at 4% and the other at $4\frac{1}{2}\%$. At the end of 7 years, the simple interest received from the latter exceeded that received from the former by Rs. 31.50 What was each sum ?



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4. a sum of Rs. 5000 was lent partly at 6% and partly at 9% simple interest. If the total interest received after 1 year was Rs. 390, what

was the ratio which the money was lent at
6 % and 9 % ?



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5. A sum of Rs. 10000 is lent partly at 8 % per annum and rest at 10 % per annum. If the yearly interest on the average is 9.2 % , what are the two parts ?



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6. A certain sum of money amounts to $Rs. 756$ in 2 yr and to $Rs. 873$ in $3 \frac{1}{2}$ yr at a certain rate of simple interest. The rate of interest per annum is



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7. Pratap borrowed a sum of money from Arun at simple interest at the rate of 12% per annum for the first three years, 16% per annum for the next five years and 20% per

annum for a period beyond eight years. If at the end of 11 years, the total interest is 6080 more than the sum, what was the sum borrowed ?



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8. A person invests money in three different schemes for 6 years, 10 years and 12 years at 10 percent, 12 percent and 15 percent simple interest respectively. At the completion of each scheme, he gets the same interest. The

ratio of his investments is (a) 2:3:4 (b) 4:3:2 (c) 3:4:6 (d) 6:3:2



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9. A sum of Rs 725 is lent in the beginning of a year at a certain rate of interest. After 8 months, a sum of Rs 362.50 more is lent but at the rate twice the former. At the end of the year, Rs 33.50 is earned as interest from both the loans. What was the original rate of

interest? (a) 3.6% (b) 4.5% (c) 5% (d) 6% (e)

None of these



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10. A man invested Rs. 1000 on simple interest at a certain rate and Rs. 1500 at 2% higher rate. The total interest in three years is Rs. 390. What is the rate of interest for Rs. 1000 ?



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1. Mr. Sharma takes loan of Rs. 25000 and repays an amount of Rs. 31000 at the end of 2 years What is the rate of simple interest at which he repays the loan ?

A. 8 % p.a

B. 6 % p.a

C. 12 % p.a

D. 9 % p.a

Answer: C



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2. A part of Rs. 1500 was lent at 10% p.a and the rest at 7% p.a. simple interest. The total interest earned in three years was Rs. 396. The sum lent at 10% was

A. Rs. 900

B. Rs. 800

C. Rs. 700

D. Rs. 600

Answer: A



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3. In what time will *Rs.* 72 become *Rs.* 81 at $6\frac{1}{4}\%$ per annum simple interest ?

A. 2 years

B. 3 years

C. 2 years 6 months

D. 4 years

Answer: A



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4. A money lender finds that due to a fall in the annual rate of interest from 8% to $7\frac{3}{4}\%$, his yearly income diminishes by Rs 61.50. His capital is (a) Rs 22,400 (b) Rs 23,800 (c) Rs 24,600 (d) Rs 26,000

A. Rs. 22400

B. Rs. 23800

C. Rs. 24600

D. Rs. 26000

Answer: C



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5. An investment triples itself in 30 years. The rate of simple interest is

A. 6 %

B. $6\frac{2}{3}\%$

C. $7\frac{1}{3}\%$

D. 10%

Answer: B



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6. Rs.800 becomes Rs.956 in 3 years at a certain rate of simple interest. If the rate of interest is increased by 4%, what amount will Rs.800 become in 3 years?

A. Rs. 1020.80

B. Rs. 1025

C. Rs. 1052

D. Rs. 1050

Answer: C



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7. In how many years, Rs 150 will produce the same interest @ 8% as Rs 800 produce in 3 years @ $4\frac{1}{2}$ % ? (a) 6 (b) 8 (c) 9 (d) 12

A. 6

B. 8

C. 9

D. 12

Answer: C



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8. what will be the ratio of simple interest earned by certain amount at the same rate of interest for 6 years and that for 8 years ?

A. 1 : 3

B. 2 : 3

C. 1 : 4

D. 3 : 4

Answer: D



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9. A sum of money at simple interest amounts to Rs 815 in 3 years and to Rs 854 in 4 years.

The sum is (a) Rs 650 (b) Rs 690 (c) Rs 698 (d)

Rs 700

A. Rs. 650

B. Rs. 690

C. Rs. 698

D. Rs. 700

Answer: C



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10. A person invested part of ₹45000 at 4% and the rest at 6%. If his annual income from both are equal. then what is the average rate of interest?

A. 4.6 %

B. 4.8 %

C. 5 %

D. 5.2 %

Answer: B



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11. 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

A. Rs. 8000

B. Rs. 8250

C. Rs. 9000

D. Rs. 9250

Answer: B



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12. A certain sum of money becomes three times of itself in 20 years at simple interest. In how many years does it become double of itself at the same rate of simple interest?

A. 8 years

B. 10 years

C. 12 years

D. 14 years

Answer: B



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13. The sum of money that will give Rs. 1 as simple interest per day the rate of 5% per annum is

A. Rs. 730

B. Rs. 3650

C. Rs. 7300

D. Rs. 36500

Answer: C



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14. Simple interest on Rs 500 for 4 years at 6.25% per annum is equal to the simple interest on Rs 400 at 5% per annum for a certain period of time. The period of time is (a) 4 years (b) 5 years (c) $6\frac{1}{4}$ years (d) $8\frac{2}{3}$ years

A. 4 years

B. 5 years

C. $6\frac{1}{4}$ years

D. $8\frac{2}{3}$ years

Answer: C



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15. A borrows Rs. 800 at the rate of 12% per annum simple interest and B borrows Rs. 910 at the rate of 10% per annum, simple interest.

In how many years will their amounts of debt be equal ?

A. 18 years

B. 20 years

C. 22 years

D. 24 years

Answer: C



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16. If the simple interest on a certain sum for 15 months at $7\frac{1}{2}\%$ per annum exceeds the simple interest on the same sum for 8 months at $12\frac{1}{2}\%$ per annum by Rs 32.50, then the sum (in Rs) is: (a) Rs 3000 (b) Rs 3060 (c) Rs 3120 (d) Rs 3250

A. Rs. 312

B. Rs. 312.50

C. Rs. 3120

D. Rs. 3120.50

Answer: C



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17. A man invested $\frac{1}{3}$ of his capital at 7%; $\frac{1}{4}$ at 8% and the remainder at 10%. If his annual income is Rs 561, the capital is (a) Rs 5400 (b) Rs 6000 (c) Rs 6600 (d) Rs 7200

A. Rs. 5400

B. Rs. 6000

C. Rs. 6600

D. Rs. 7200

Answer: C



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18. Simple interest on a certain amount is $\frac{9}{16}$ of the principal. If the numbers representing the rate of interest in percent and time in years be equal, then time, for which the principal is lent out, is $5\frac{1}{2}$ years (b) $6\frac{1}{2}$ years (c) 7 years (d) $7\frac{1}{2}$ years

A. $5\frac{1}{2}$ years

B. $6\frac{1}{2}$ years

C. 7 years

D. $7\frac{1}{2}$ years

Answer: D



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19. A person lends 40 % of his sum of money at 15 % per annum, 50 % of rest at 10 % per annum and the rest at 18 % per annum rate of

interest. What would be the annual rate of interest, if the interest is calculated on the whole sum ?

A. 13.4 %

B. 14.33 %

C. 14.4 %

D. 13.33 %

Answer: C



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20. The rates of simple interest in two banks A and B are in the ratio 5:4. A person wants to deposit his total savings in two banks in such a way that he received equal half-yearly interest from both. He should deposit the savings in banks A and B in the ratio: (a) 2 : 5 (b) 4 : 5 (c) 5 : 2 (d) 5 : 4

A. 5 : 2

B. 2 : 5

C. 4 : 5

D. 5 : 4

Answer: C



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21. A person lent a certain sum of money at 4% simple interest and in 5 years, the interest amounted to Rs. 520 less than the sum lent. The sum lent was

A. Rs. 600

B. Rs. 650

C. Rs. 700

D. Rs. 750

Answer: B



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22. A lent Rs. 600 to B and some amount to C at the rate of $8\frac{1}{3}\%$ per annum simple interest. After 5 years he got the total interest of Rs. 400 from B and C together. The amount of money lent by A to C was

A. Rs. 300

B. Rs. 360

C. Rs. 400

D. Rs. 420

Answer: B



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23. Arun borrowed a sum of money from Jayant at the rate of 8% per annum simple interest for the first four years, 10% per annum for the next 6 years and 12% per

annum for the period beyond 10 years. If he pays a total of Rs 12160 as interest only at the end of 15 years, how much money did he borrow? (a) Rs 8000 (b) Rs 9000 (c) Rs 10000 (d) Rs 12000

A. Rs. 12000

B. Rs. 10000

C. Rs. 8000

D. Rs. 9000

Answer: C



24. Mohan lent some amount of money at 9 % simple interest and an equal amount of money at 10 % simple interest each for 2 years. If his total interest was Rs. 760, what amount was lent in each case ?

A. Rs. 1700

B. Rs. 1800

C. Rs. 1900

D. Rs. 2000

Answer: D



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25. What sum of money will amount to Rs. 520 in 5 years and to Rs. 568 in 7 years at simple interest?

A. Rs. 400

B. Rs. 120

C. Rs. 510

D. Rs. 220

Answer: A



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Self Assessment Sheet

1. Out of a sum of Rs. 640, a part was lent at 6% simple interest and the other at 9% simple interest. If the interest on the first part after 3 years is equal to the interest on the second part after 6 years then what is the second part ?

A. Rs.120

B. Rs. 140

C. Rs. 180

D. Rs. 160

Answer: D



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2. What sum will amount to Rs. 6600 in 4 years at 8 % p.a. simple interest ?

A. Rs. 6000

B. Rs. 5000

C. Rs. 6200

D. None of these

Answer: B



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3. Rs. 1200 amounts to Rs. 1632 in 4 years at certain rate of simple interest. If the rate of

interest is increased by 1%, it would amount to how much ?

A. Rs. 1635

B. Rs. 1644

C. Rs. 1670

D. Rs. 1680

Answer: D



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4. A certain sum lent out at simple interest doubles itself in 20 years. Number of years in which this sum triples itself at the same rate on interest is :

A. 30

B. 40

C. 25

D. 20

Answer: B



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5. A sum of money becomes $\frac{41}{40}$ of itself in $\frac{1}{4}$ year at a certain rate of simple interest. The rate of interest per annum is :

A. 10 %

B. 1 %

C. 2.5 %

D. 5 %

Answer: A





6. Simple interest on a certain is $\frac{16}{25}$ of the principal. If the number representing the rate of interest in per cent and time in years be equal, then time, for which the principal amount is lent out, is :

A. $5\frac{1}{2}$ years

B. $6\frac{1}{2}$ years

C. 6 years

D. 8 years

Answer: D



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7. A man borrowed Rs. 1000 to build a house. He pays. 5% per annum simple interest. He lets the house and receives a rent of Rs. 12.50 per month. In how many years he is expected to clear the debt ?

A. 7

B. 15

C. 10

D. 8

Answer: C



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8. The difference between the interest received from two different banks on Rs. 5000 for 2 years is Rs. 25. The difference between their rates is :

A. 1 %

B. 2.5 %

C. 0.5 %

D. 0.25 %

Answer: D



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9. If x , y , z are three sums of money such that y is the simple interest on x , z is the simple interest on y for the same time and at

the same rate of interest, then we have

$$x^2 = yz \quad (b) \quad y^2 = xz \quad (c) \quad z^2 = xy \quad (d) \quad xyz = 1$$

A. $xyz = 1$

B. $z^2 = xy$

C. $x^2 = yz$

D. $y^2 = zx$

Answer: D



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10. Rs. 1500 is invested at a rate of 10% simple interest and interest is added to the principal after every 5 years. In how many years will it amount to Rs. 2500 ?

A. $6\frac{1}{9}$ years

B. $6\frac{1}{4}$ years

C. 7 years

D. None of these

Answer: A



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