



MATHS

BOOKS - PEARSON IIT JEE

FOUNDATION

SIMPLE INTEREST AND COMPOUND INTEREST

Example 9 1

1. Find the simple interest on

(a) Rs. 2500 at 15% per annum for 2 years.

(b) Rs. 3000 at $17\frac{1}{3}\%$ per annum for $1\frac{1}{2}$ years.



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2. Find the simple interest on

(a) Rs. 2500 at 15% per annum for 2 years.

(b) Rs. 3000 at $17\frac{1}{3}\%$ per annum for $1\frac{1}{2}$ years.





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Example 9 2

1. Calculate the simple interest on

(a) Rs. 5235 at 8% per annum for 1 year and 8 months.

(b) Rs. 8125 at $14\frac{2}{5}$ per annum for 2 years and 3 months.



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2. Calculate the simple interest on

(a) Rs. 5235 at 8% per annum for 1 year and 8 months.

(b) Rs. 8125 at $14\frac{2}{5}$ per annum for 2 years and 3 months.



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Example 9 3

1. Find the simple interest on Rs. 7300 at 15% per annum from April 28 to November 4.



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Example 9 4

1. Find the sum to be invested to earn a simple interest of Rs. 360 in 8 months at the rate of 15% per annum.



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Example 9 5

1. A certain sum has been borrowed at 16% per annum under simple interest. If the sum amounts to Rs. 12000 in 1 year and 3 months, find the sum borrowed.



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Example 9 6

1. Find the rate of simple interest per annum, if a sum borrowed becomes double in 5 years.



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Example 9 7

1. What time will it take for a sum to amount to three times itself at 12% per annum under simple interest ?



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Example 9 8

1. A sum amounts to Rs. 5600 in 4 years and Rs. 6400 in 6 years at a certain rate of simple interest. Find the rate of interest per annum and the sum.



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Example 9 9

1. Ramu borrowed Rs35000 from Somu. A part of the sum is borrowed at 10% per annum under simple interest for 4 years and the remaining part at 11% per annum under simple interest for $(4)\frac{1}{2}$ years. If the total interest earned by Somu is Rs15900, then find the sum borrowed at each rate.



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Example 9 10

1. A man who borrowed a certain sum agrees to repay it by paying Rs. 4032 at the end of the first year and Rs. 10075 at the end of the second year. If the rate of simple interest is 12% per annum, find the sum borrowed.



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Example 9 11

1. The simple interest on Rs. 3000 at $R\%$ in 2 years equals to the simple interest on Rs.

2000 at 10% per annum in 3 years. Find the simple interest (in Rs.) on Rs. 5000 at $R\%$ per annum for 4 years.



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Example 9 12

1. A certain sum doubles itself in 4 years. Find the time taken to it to become thrice itself.



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Example 9 13

1. Sailesh lends a sum of Rs. 6000 to Kalyan at the rate of 10% per annum compounded annually. Find the amount at the end of 2 years.



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Example 9 14

1. Srikanth borrowed a sum of Rs. 12000 from a finance company at the rate of 20% per annum under compound interest, compounded annually. Find the amount and C.I. for a period of 2 years.



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Example 9 15

1. A person borrowed a sum of Rs. 8000 at the rate of 10% per annum compounded semi-annually. Find the amount and compound interest for a period of one year.



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Example 9 16

1. A borrowed a sum of Rs. 4000 from B at the rate of 10% per annum under simple interest.

Immediately A gave this money to C at the same rate under compound interest compounded quarterly. Find the profit of A in doing so after 6 months.



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Example 9 17

1. Q and R borrowed Rs. 26000 and Rs. 25000 respectively, for a period of 2 years. Q paid simple interest at the rate of 2% per annum,

while R paid compound interest at the same rate, compounded annually. Who paid more interest and by how much ?



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Example 9 18

1. Varun started a business with an initial investment of Rs. 300000. In the first first year, he incurred a loss of 3%. So he invested the remaining amount in the bank at 4% per

annum for the second year and at 5% per annum for the third year under compound interest compounded annually. Find the amount.



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Example 9 19

1. The population of a city increases at the rate of 10% per annum. Find the population of the

city in the year 2007 if its population in 2005 was 2 crores.



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Example 9 20

1. The price value of the share of a company increased at the rate of 20% in a year and decreased at the rate of 10% in the next year. If the present value of the share is Rs. 1000, then what will be its value after 2 years ?



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Example 9 21

1. Mahesh bought a house for Rs. 200000. At the end of the first year, he sold it at a loss of 10% on his investment. He invested the money thus obtained at 20% per annum compound interest for 2 years. The value this investment would amount to (in Rs.)



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Very Short Answer Type Questions

1. In what time will a sum double itself at 4% per annum, at simple interest ?



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2. The extra money paid by a borrower for using another person's money is called _____.



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3. Simple interest is calculated on the (original) principal for the entire loan period.

(True or False)



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4. In calculating the time for charging the interest, the day on which the money is borrowed and the day on which money is repaid are included. True or False ?



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5. Simple interest on a principal of Rs. 100 for 2 years at the rate of 5% per annum is ____.



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6. When the interest is calculated annually, simple interest and compound interest are equal for the first year.



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7. A sum of Rs. 2000 amounts to Rs. 3000 in two years at simple interest. Interest for three years is _____.



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8. In compound interest, principal changes periodically.



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9. Find the compound interest on Rs. 1000 at 5% per annum for one year, compounded annually.



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10. Compound interest for one year on Rs. 400 calculated half yearly at 10% per annum is Rs. 84.



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11. A person borrowed Rs. 100 at the rate of 10% per annum, compounded annually for 2 years. The amount he has to pay after 2 years is Rs. 121.



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12. 'A' provides loan at the rate of 7% per annum, simple interest and 'B' provides loan at the rate of 5% per annum, compound interest. Between 'A' and 'B', who gets more profit ?



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13. The time period after which interest is added each time to form a new principal is called _____.



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14. Bank A provides loan at 5% per annum at simple interest and Bank B provides loan at the same rate for the same period,

compounded annually. Then, which bank is preferable for a person to take a loan ?



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15. If P is the principal, R is the rate of interest per annum and n is the time period, find the amount at the end of the n th year if the interest is compounded yearly.



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16. A certain sum becomes Rs. 2400 in 10 years at the rate of 2% per annum under simple interest. Find the sum.



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17. A certain sum amounts to Rs. 320 at 6% per annum simple interest and to Rs. 360 at 8% per annum simple interest. Find the principal.



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18. If $P = \text{Rs. } 2500$, $R=20\%$ per annum, then in what time will it amount to $\text{Rs. } 3600$ at compound interest ?



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19. A certain sum amounts to $\text{Rs. } 4800$ in 4 years and to $\text{Rs. } 5250$ in 5 years at simple interest. Find the interest for 2 years.



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20. In how many years, will Rs. 2200 amount to Rs. 2266 when money is borrowed at 2% per annum at simple interest ?



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21. If $P = \text{Rs. } 5550$ and $R = 12\%$ per annum simple interest. In what time will it amount to Rs. 6882 ?



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22. The amount and compound interest on Rs. 2500 for 2 years at 10% per annum respectively are (in rupees) ____ and ____.



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23. Given Rs. 5 becomes Rs. 25 at the rate of 8% per annum simple interest. Find the time period. (in years)



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24. Determine the rate of interest for a sum that becomes $\frac{343}{216}$ times itself in 3 years interest compounded annually.



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25. Find the simple interest on Rs. 3250 at 5 % per annum for the period from 10th March to 22nd May of the same year.

A. Rs 24.95

B. Rs 32.95

C. Rs 45.95

D. Rs 33.95

Answer: B



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26. A sum of money invested at compound interest triples itself in five years. In how many years will it become 27 times itself at the same rate of compound interest ?



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27. If $P = \text{Rs. } 6000$ and $R = 5\%$ per annum, find the amount in 1 year interest compounded half yearly.



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28. Find the difference between simple interest and compound interest, if $P = \text{Rs. } 35000$, $R = 4\%$ per annum and $n = 3$ years.



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29. A person borrows Rs. 2000 at 20% per annum at C.I. compounded half yearly. Immediately he lends it to another person at the same rate on the condition that the interest is compounded for every $\frac{1}{4}$ th year. Find the amount gained by the first person in $\frac{1}{2}$ year.



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30. The difference between the simple interest received from two different banks on Rs. 2000 for 2 years is Rs. 30, the difference between their rates of interest is



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Short Answer Type Questions

1. What is the compound interest on Rs. 38000 at 20% per annum for a period of $\frac{3}{2}$ years

compounded semi-annually ?



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2. Ramu invested Rs. 12000 in a finance company at 10% per annum, interest is compounded annually for 3 years and Ravi invested Rs. 12000 for the same period at 15% per annum, interest compounded annually.

The total interest paid to Rammu is



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3. Ramu invested Rs. 12000 in a finance company at 10% per annum, interest is compounded annually for 3 years and Ravi invested Rs. 12000 for the same period at 15% per annum, interest compounded annually.

The total interest paid to Ravi is



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4. Ramu invested Rs. 12000 in a finance company at 10% per annum, interest is compounded annually for 3 years and Ravi

invested Rs. 12000 for the same period at 15% per annum, interest compounded annually.

Difference in the amounts paid to them after 3 years is



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5. $P = \text{Rs. } 2000$ and $R = 3\%$ per annum, find the amount in $\frac{1}{2}$ a year approximately, interest compounded quarterly.



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6. The population of a village increases at a rate of 5% every year. If the present population of the village is 5620, find the population after 1 year.



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7. Ten thousand volunteers are registered with a charitable trust. The number of volunteers increases at the rate of 4% for every six months. Find the time period at the end of

which the total number of volunteers becomes 10816.



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8. A person borrows Rs. 20000 for 2 years at compound interest. The money lender gives two options. The first is at 3% per annum, the second option is at 2% for the first year and at 4% for the second year. Which option is profitable to the borrower and by how much ?



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9. The simple interest on a certain sum of money is $\frac{3}{16}$ of the principal and the number of months is equal to the rate per cent. Find the rate per annum and the time period.



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10. What sum of money lent at 2% per annum under S.I. will yield the same interest in 3 years as Rs. 3600 yields in 7 years at the rate of 3% per annum S.I. ?



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11. The simple interest and compound interest on a certain sum for 2 years are Rs. 800 and Rs. 880 respectively. The rate of interests (in % per annum) on both the sums is the same. If the interest on the sum lent at compound interest is compounded annually, find the rate of interest (in % per annum).



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12. Ramu lent Rs. 2800 to Suresh at 2% per annum at simple interest. After 5 years, Suresh repaid the debt by giving a cycle and Rs. 2500.

What is the value of the cycle ?



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13. A certain sum quadruples in 3 years at compound interest, interest being compounded annually. In how many years will it become 64 times itself ?



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14. Ramu lent a part of Rs. 3000 at 2% per annum at S.I. and the remaining part at 3% per annum at S.I. At the end of 3 years he received an amount of Rs. 3240. How much did he lend at 3% ?



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15. The simple interest on Rs. 1800 at $R\%$ per annum for 2 years is equal to the simple interest on Rs. 4800 at 15% per annum for 1

year. Find the simple interest (in Rs.) on Rs. 2400 for 3 years at $R\%$ per annum.



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Essay Type Questions

1. Given that carbon-14 (C_{14}) decays at a constant rate in such a way that it is reduced to 25% in 1244 years. Find the age of a tree in which the carbon is only 6.25% of the original.



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2. Raju borrowed Rs. 3500 from Giri at 10% per annum, under simple interest. After 2 years when Raju wanted to clear the debt, Giri insisted him to pay the amount at compound interest. What is the difference in the amounts between the two ?



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3. A person borrowed a sum of RS 9000 at a rate of 10% per annum interest compounded

annually. He repaid an amount of Rs 1900 at the end of the first year. Find the amount that he has to pay at the end of the next two years in order to repay the rest of the loan completely in a single instalment.



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4. A certain sum was deposited in a bank at 6% per annum at simple interest for 3 years. Had it been deposited at a rate of interest 2% per

annum more, the interest received would have been Rs. 750 more. Find the sum.



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5. A sum was split into three parts. The first part was lent at 10% per annum for 4 years. The second part was lent at 20% per annum for 6 years. The third part was lent at 30% per annum for 5 years. Each part was lent at simple interest and the same amount of

simple interest was realised from each. Find the ratio of the first, second and third parts.



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Concept Application Level 1

1. The simple interest on a sum of money is $\frac{4}{9}$ times the principal and the rate of interest per annum is numerically equal to the number of years. Find the rate of interest per annum.

A. $\frac{10}{3} \%$

B. $\frac{15}{3} \%$

C. $\frac{20}{3} \%$

D. $\frac{15}{2} \%$

Answer: C



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2. A certain sum becomes 3 times itself in 6 years at simple interest. In how many years will it become 9 times itself ?

A. 18

B. 20

C. 24

D. 22

Answer: C



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3. A certain sum amounts to four times the principal within a period of 2 years. The rate of simple interest per annum is

A. 150 %

B. 15 %

C. 1.5 %

D. 10 %

Answer: A



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4. A certain sum becomes Rs. 6400 in 4 years and Rs. 8200 in 7 years at simple interest. Find the principal.

A. Rs 4000

B. Rs 4200

C. Rs 4400

D. Rs 40,000

Answer: A



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5. A sum of money amounts to Rs 2000 in 3 years and Rs 2500 in 5 years at simple interest.

Find the rate of interest per annum.

A. $33\frac{1}{3}\%$

B. $12\frac{1}{3}\%$

C. 25%

D. 20%

Answer: D



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6. What will be the compound interest on Rs 15,625 for 3 years at 8% per annum, if the interest is compounded annually?

A. Rs 4805

B. Rs 4508

C. Rs 4580

D. Rs 4058

Answer: D



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7. The simple interest and the compound interest on a certain sum for 2 years is Rs. 1250

and Rs. 1475 respectively. Find the rate of interest.

A. 36% per annum

B. 34% per annum

C. 32% per annum

D. 38% per annum

Answer: A



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8. A person lent a certain sum of money at 12% per annum simple interest. In 5 years, the interest received was Rs. 250 less than the sum lent. Find the sum lent. (in Rs.)

A. 500

B. 750

C. 625

D. 1000

Answer: C



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9. A certain sum becomes 3 times itself in 4 years at compound interest. In how many years does it become 27 times itself ?

A. 15years

B. 12 years

C. 36 years

D. 21 years

Answer: B





10. At what rate of simple interest per annum, does the interest on Rs. 1200 in 2 years equals the interest on Rs. 600 at 4 years at $\frac{7}{2}\%$ per annum ?

A. $\frac{3}{4}\%$

B. $\frac{7}{2}\%$

C. $\frac{4}{3}\%$

D. $\frac{7}{8}\%$

Answer: B



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11. The population of a village increases at a rate of 5% every year. If the present population of the village is 5620, find the population after 1 year.

A. 5805

B. 6121

C. 5901

D. 6000

Answer: C



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12. Kalyan purchased an old bike for Rs. 12000. If its cost after 2 years is Rs. 11524.80, the rate of depreciation is _____.

A. 1% per annum

B. 4% per annum

C. 3% per annum

D. 2% per annum

Answer: D



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13. Ram borrowed Rs 8000 at $3\frac{1}{2}\%$ per annum compound interest for his family needs. How much amount does he have to pay to clear the debt at the end of one year and three months?

A. Rs 8352.45

B. Rs 8532.45

C. Rs 8253.54

D. Rs 8352.54

Answer: A



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14. Ravi borrowed Rs. 1000 from Sridhar at 3% C.I. for the first year, 5% C.I. for the second

year. What amount does Sridhar get at the end of the second year ?

A. Rs 1081

B. Rs 1081.50

C. Rs 1082.50

D. Rs 1083

Answer: B



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15. Saleem borrowed Rs. 20000 at compound interest and paid Rs. 22050 after 2 years to clear the debt. Find the rate of interest.

A. 3 %

B. 5 %

C. 4 %

D. 7 %

Answer: B



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16. If Rs. 300 is the interest paid on a certain sum at the rate of 5% per annum simple interest for a period of 5 years, then find the sum. (in Rs.)

A. 1200

B. 1600

C. 2000

D. 1800

Answer: A



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17. At what rate per cent per annum at compound interest will the sum of Rs. 375 amount to Rs. 1029 in 3 years ?

A. 20

B. 30

C. 25

D. 40

Answer: D



18. A person borrowed a certain sum of money at $16\frac{2}{3}\%$ per annum compound interest. He cleared the debt by paying Rs 20,825 at the end of 2 years. Find the sum borrowed.

A. Rs 15,300

B. Rs 15,800

C. Rs 14,300

D. Rs 14,800

Answer: A



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19. In how many years will a sum of Rs. 3200 compounded quarterly at the rate of 50% per annum amount to Rs. 4050 ?

- A. One year
- B. Half year
- C. Two years
- D. 3 years

Answer: B



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20. Ramakrishna borrowed Rs 160,000 from Anirudh at 10% per annum simple interest. After 2 years, when Ramakrishna wants to clear the debt, Anirudh insisted Ramakrishna to pay him at compound interest. How much more must Ramakrishna pay?

A. Rs 800

B. Rs 1620

C. Rs 1600

D. Rs 810

Answer: C



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21. A certain sum triples in 4 years at compound interest, interest being compounded annually. In how many years would it become 27 times itself ?

A. 9

B. 10

C. 12

D. 16

Answer: C



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22. A sum of Rs. 5120 amounts to Rs. 7290 in 3 years at compound interest. Find the rate of interest per annum.

A. $33\frac{1}{3}\%$

B. $12\frac{1}{2}\%$

C. $8\frac{1}{3}\%$

D. $17\frac{1}{2}\%$

Answer: B



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23. The difference between the compound interest and the simple interest on a certain

sum of money for 2 years at 11% per annum is

Rs 363. Find the sum.

A. Rs 33,000

B. Rs 31,000

C. Rs 30,000

D. Rs 32,000

Answer: C



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24. A sum of Rs 3000 is partly lent at 3% per annum simple interest for $\frac{7}{2}$ years and partly at 2% per annum simple interest for 4 years. If total interest earned is Rs 280, then the sum lent at 3% per annum is _____.

A. Rs 1600

B. Rs 1400

C. Rs 1800

D. Rs 2000

Answer: A



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25. Find the simple interest (approximately) on Rs.700 from 20 December 2006 to 20 June 2007 at 6% per annum (in Rs.)

A. 24

B. 27

C. 28

D. 21

Answer: D



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26. A sum of money triples itself in 3 years at compound interest. In how many years will it become 9 times itself ?

A. 4

B. 9

C. 6

D. 7

Answer: C



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27. Raju invested a sum of Rs. 5832 at a rate of interest $n\%$ per annum, compounded annually. Find the value of n , if he received a sum of Rs. 13824 after 3 years.

A. $33\frac{1}{3}$

B. $35\frac{2}{3}$

C. $33\frac{4}{3}$

D. $33\frac{5}{3}$

Answer: A



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28. A sum of Rs. 2500 is invested for 2 years at 20% per annum, interest compounded half-yearly. Find the compound interest.

A. Rs 366..25

B. Rs 1660.25

C. Rs 1160.25

D. Rs 1330

Answer: C



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29. Alok borrowed a certain sum on 9 July 2006 and paid an amount of Rs 438 which included an interest of Rs 26 on 8 November 2006. Find the rate of interest, charged to Alok per annum.

A. $6\frac{1}{4}\%$

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

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

D. $13\frac{1}{3}\%$

Answer: B



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30. A certain sum amounts to Rs. 4500 in $2\frac{1}{2}$ years at 20% per annum simple interest. Find the sum (in Rs.).

A. 3000

B. 2400

C. 2700

D. 3600

Answer: A



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31. A certain sum was lent at $R\%$ per annum at compound interest for 2 years. In which of the following cases would it fetch the maximum interest?

A. Interest is calculated annually.

B. Interest is calculated semi-annually.

C. Interest is calculated quarterly.

D. Interest is calculated three times a year.

Answer: C



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Concept Application Level 2

1. Sushma deposited Rs. 6500 which amounted to Rs. 7800 in 4 years at simple interest. Had the interest been 2% more per annum, how much would she have received ? (in Rs.)

A. 8000

B. 8500

C. 7600

D. 8320

Answer: D



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2. The cost of a scooter is Rs. 10000. Its value depreciates at the rate of 8% per annum . Calculate the total depreciation in its value at the end of 2 years.

A. Rs 1536

B. Rs 1356

C. Rs 1653

D. Rs 1356

Answer: A



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3. A person borrowed Rs 8000 at $2\frac{1}{2}\%$ per annum under S.I. The sum borrowed is immediately given to another person at the same rate on the condition that the interest is compounded semi-annually. Find the amount gained by the first person in one year.

A. Rs 3.25

B. Rs 2.25

C. Rs 1.25

D. Rs 0.25

Answer: C



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4. A boy's height is increasing at the rate of 2% when compared to that of the previous year. If his present height is 156.06 cm, what was his height two years ago ?

A. 148 cm

B. 150 cm

C. 152 cm

D. 151 cm

Answer: B



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5. Ramu invested a sum of Rs. 12500 at 12% per annum compound interest. He received an

amount of Rs. 15680 after x years. Then, the value of x is

A. 1

B. 4

C. 3

D. 2

Answer: D



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6. The rate of interest for a sum that becomes $\frac{729}{576}$ times itself in 2 years, when compounded annually, is

A. $\frac{32}{5} \%$

B. $\frac{12}{5} \%$

C. $\frac{25}{2} \%$

D. $\frac{12}{7} \%$

Answer: C



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7. A person deposited Rs. 6000 in a bank for 2 years. At the end of the first year, he withdrew Rs. 500. How much does he get from the bank at the end of the second year interest paid at a rate of $8\frac{1}{3}\%$ per annum compounded annually ?

A. Rs 6500

B. Rs 7000

C. Rs 6725

D. Rs 6025

Answer: A



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8. A sum amounts to $Rs3600$ at 2% per annum under simple interest and $Rs4800$ at 4% per annum under simple interest. The time taken is _____.

A. $2.5years$

B. $3years$

C. $30years$

D. 25years

Answer: D



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9. Find the compound interest on Rs 50,000 for 3 years, compounded annually, and the rate of interest being 10 % , 12 % and 15 % for the three successive years, respectively.

A. Rs 20,840

B. Rs 70,840

C. Rs 60,720

D. Rs 67,560

Answer: A



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10. A person invested one-fifth of the capital at 5% per annum, one-sixth of the capital at 65 per annum and the rest at 10% per annum simple interest. If the annual interest received

on his investment is Rs. 150, then find the capital. (in Rs.)

A. 1000

B. 1500

C. 2000

D. 1800

Answer: D



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11. Kailash set up a factory by investing Rs. 1000000. During the first two years, his profits were 10% and 15% respectively. If he reinvested the profit of each year at the beginning of the next year, his total profit (in Rs.) is

A. 256, 000

B. 25, 000

C. 275, 000

D. 27, 060

Answer: A



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12. In what time will the sum of Rs. 1875 yield a compound interest of Rs. 477, at 12% per annum, compounded annually ?

A. 2 years

B. 1 year

C. 3 years

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

Answer: A



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13. Find the simple interest on Rs. 1098 at 5% per annum from 5 May 1996 to 25 May 1996.

A. Rs 5

B. Rs 7

C. Rs 3

D. Rs 4

Answer: C



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14. A certain sum was invested at a certain rate at simple interest. It took 8 years to quadruple the sum. Find the time it would take to become 10 times itself (in years).

A. 18

B. 24

C. 36

D. 30

Answer: B



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15. A certain sum amounts to Rs. 900 at simple interest in 5 years. It amounts to Rs. 1020 at the same rate at simple interest in 7 years. Find the sum (in Rs.).

A. 500

B. 550

C. 650

D. 600

Answer: D



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16. Find the difference between the simple interest and the compound interest on Rs. 15000 at 12% per annum for 2 years (in Rs.).

A. 216

B. 240

C. 180

D. 192

Answer: A



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17. If a sum was Rs. 10000 more and was lent at S.I. for 2 years at 10% per annum, then the extra interest would be ____ (in Rs.).

A. 4000

B. 1000

C. 2000

D. 500

Answer: C



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18. Rs. 2000 was lent at 40% per annum at simple interest for 1 year. If interest on it was at compound interest and compounded

quarterly, then the amount obtained would be ____.

A. Rs 64.10 more

B. Rs 64.10 less

C. Rs 128.20 less

D. Rs 128.20 more

Answer: D



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19. Find the simple interest on Rs. 3000 at 10% per annum from January 1, 2007 to March 15, 2007 (in Rs.)

A. 60

B. 120

C. 90

D. 180

Answer: A



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20. A certain sum was invested at a certain rate of simple interest. It took 20 years to quadruple. Find the time that the sum would take to become 9 times, if the rate of interest was 5 percentage points more (in years).

A. 30

B. 36

C. 40

D. 45

Answer: C



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Concept Application Level 3

1. Suresh and Naresh borrowed Rs. 62500 and Rs. 60000 respectively for a period of 2 years. Suresh paid simple interest at the rate of 4% per annum, while Naresh paid compound interest at the same rate compounded annually. Who paid more interest and by how much ?

A. Naresh paid more by Rs 104.

B. Suresh paid more by Rs 104.

C. Naresh paid more by Rs 94.

D. Both paid the same interest.

Answer: B



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2. The simple interest and compound interest on a certain sum for 2 years are Rs. 2400 and Rs. 2640 respectively. The rates of interests (in

% per annum) for both are the same. The interest on the sum lent at compound interest is compounded annually. Find the rate of interest (in % per annum).

A. 30

B. 20

C. 25

D. 10

Answer: B



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3. A sum was split into three parts. The first part was lent at 10% per annum for 4 years. The second part was lent at 20% per annum for 6 years. The third part was lent at 30% per annum for 5 years. Each part was lent at simple interest and the same amount of simple interest was realised from each. Find the ratio of the first, second and third parts.

A. 15:5:2

B. 20:7:2

C. 15:5:4

D. 20:9:4

Answer: C



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4. A doctor wants to divide Rs. 145000 between his son and daughter who are 12 years and 14 years respectively, in such a way that the sum invested at the rate of $12\frac{1}{2}\%$ per annum compounded annually will give the

same amount to each, when they attain 16 years. How should he divide the sum?

A. Rs 81,000 to son and Rs 64,000 to daughter

B. Rs 64,000 to son and Rs 81,000 to daughter

C. Rs 45,000 to son and Rs 100,000 to daughter

D. Rs 100,000 to son and Rs 45,000 to daughter

Answer: B



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5. Given that carbon-14 (C_{14}) decays at a constant rate in such a way that it is reduced to 25% in 1244 years. Find the age of a tree in which the carbon is only 6.25% of the original.

A. 3122 years

B. 3210 years

C. 3124 years

D. 3214 years

Answer: C



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6. Rs. 2800 was split into two parts. One part was lent at 20% per annum simple interest for 10 years. The other part was lent at 25% per annum simple interest for 20 years. Each part yielded equal interest. Find the lower part (in Rs.).

A. 800

B. 900

C. 1000

D. 1200

Answer: A



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7. Rs. 6000 was lent at compound interest for 2 years. The rates of interest for the first and second years were 10% per annum and 30%

per annum respectively. If the rate of interest each year had been 20% per annum, then the additional amount obtained would have been (in Rs.).

A. 60

B. 30

C. 90

D. 120

Answer: A



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8. The value of a motor cycle is Rs. 80000 and its value depreciates by 20% every year, with respect to its value at the beginning of the year. What is the profit earned by selling the motor cycle at the end of the 2nd year at Rs. 53600 ?

A. Rs 2200

B. Rs 2400

C. Rs 2300

D. Rs 2100

Answer: B



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9. Govind has two sons. Their ages are 10 years and 8 years. He plans to invest a total of Rs. 1.22 lakh in the names of the two sons at 20% per annum compound interest. Those sums had to be such that when the sons attained the age of 18 years, would receive equal amounts. How much does he plan to invest in the name of his older son (in lakhs of rupees) ?

A. 0.96

B. 0.72

C. 0.84

D. 1.08

Answer: B



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