



# MATHS

## BOOKS - ICSE

### SIMPLE INTEREST

#### Example

1. Find the simple interest on Rs. 8250 at 8% per annum for 3 years. Also, find the amount.



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2. Find the simple interest on Rs. 72000 at  $6\frac{1}{2}\%$  per annum for 4 years. Also, find the amount.



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3. How long will it take for a sum of Rs. 12600 invested at 9% per annum simple interest to amount to Rs. 16002?



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4. A sum of Rs. 16000 earns a simple interest of Rs. 2560 in 2 years. Find the rate of interest per annum.



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5. At what rate per cent per annum simple interest will a sum double itself in 8 years ?



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6. What sum will yield Rs. 1125 as simple interest in 2 years at 9% per annum?



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7. What sum will amount to Rs. 1292 in 3 years at 12% per annum simple interest?



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8. A sum of money invested at 9% per annum simple interest amounts to Rs. 37760 in 2

years. What will it amount to in 3 years at 10% per annum?



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**9.** ₹15, 000 is invested at 10 % p.a. for 1 year.

Find the interest at the end of 1 year and also the amount.

A. = 1, 000, ₹13, 000

B. = 3, 000, ₹21, 000

C. = 1, 500, ₹16, 500

D. = 2, 500, ₹12, 500

**Answer: C**



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**10.** ₹8000 is borrowed at 4% interest for 3 years. Find the interest and the amount at the end of 3 years.



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**11.** Mohan borrowed some money at  $6\%$  per annum. He had to pay ₹3600 as interest after 3 years. What sum did he borrow ?



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**12.** At what rate per cent per annum will ₹700 produce ₹168 as simple interest in 2 years ?



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**13.** In how much time will ₹12,000 earn an interest of ₹4800 at 8% interest p.a. ?



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**14.** Find the sum of money which when invested for 4 years at 5% per annum yields an amount of ₹540.



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**15.** At what rate per cent will a sum of money triple itself in 12 years ?



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**16.** A sum of money invested at certain rate of interest doubles itself in 10 years. In how much time will it treble itself at the same rate ?



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17. A sum of money lent out at simple interest amounts to ₹1900 in 1 year and to ₹2800 in 4 year. Find the rate of interest and the sum of money.

A.  $R = 13.75\%$ ,  $P = ₹ 1760$

B.  $R = 18.75\%$ ,  $P = ₹ 1600$

C.  $R = 13.75\%$ ,  $P = ₹ 1300$

D.  $R = 19.75\%$ ,  $P = ₹ 1680$

**Answer: B**



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**18.** Arun has a certain sum deposited in a bank at 5% per annum. The bank increases the rate of interest from 5% to 6%. Arun deposits ₹2000 more in his account. The annual interest received by him now is ₹220 more than before. Find his original deposit.



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**19.** Divide ₹3500 into two parts so that simple interest on the first part when deposited for 2

years at 15% per annum and that on the second part when deposited for 3 years at 16% per annum in a bank add to give the total interest of ₹1320.



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20. In how much time will the simple interest on certain sum of money at  $12\frac{1}{2}\%$  per annum be  $\frac{7}{4}$  of itself ?



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21. Interest earned on ₹12,000 is ₹980 more than the interest earned on ₹8500. If both the sums were invested at same rate of interest for 4 years, find the rate of interest.



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22. Rajni and Mohini deposited Rs.3000 and Rs.4000 in a company at the rate of 10% per annum for 3 years and  $2\frac{1}{2}$  years respectively. The difference of the amounts received by them will be

A. 100

B. 1000

C. 900

D. 1100

**Answer: D**



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**Exercise 11**

1. Find the simple interest and amount on each of the following :

(i) Rs. 8400 for 4 years at 8% per annum.

(ii) Rs. 50000 for 3 years  $12\frac{1}{2}\%$  per annum.

(iii) Rs. 9275 for 2 years at  $7\frac{1}{2}\%$  per annum.



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2. In what time will Rs. 7500 amount to Rs. 8625, if simple interest is reckoned at  $7\frac{1}{2}\%$  per annum?





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3. In what time will Rs. 3600 amount to Rs. 4320 at 4% per annum simple interest?



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4. At what rate per cent per annum will Rs. 6300 yield an interest of Rs. 2100 in 4 years?



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5. At what rate per cent per annum simple interest will Rs. 66000 amount to Rs. 72720 in 2 years?



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6. The simple interest on a sum of money for 5 years is  $\frac{3}{5}$  of the sum. Find the rate per cent per annum.



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7. The simple interest on a certain sum for 3 years at 10% per annum is Rs. 829.50. Find the sum.



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8. What sum will yield an interest of Rs. 7840 in 2 years at  $6\frac{1}{4}\%$  per annum?



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9. At what rate per cent per annum simple interest will a sum treble itself in 16 years?



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10. A sum when reckoned at 6% per annum simple interest amounts to Rs. 4130 in 3 years. Find the sum.



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**11.** A sum of money put at 11% per annum simple interest amounts to Rs. 10370 in 2 years. What will it amount to in 3 years at the same rate?



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**12.** A sum of money put at 9% per annum simple interest amounts to Rs. 10160 in 3 years. What will it amount to in 2 years at 8% per annum?





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Try This

1. Find the interest on ₹12,000 at 8% per annum for 4 years.



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2. What sum of money will earn an interest of ₹160 at the rate of 4% per year for 2 years ?



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3. Find the time in which ₹800 will earn an interest of ₹120 at 5 % per annum.



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4. Find the rate of interest per annum at which ₹900 will yield an interest of ₹180 in 5 years.



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5. What sum of money will amount to ₹840 in 3 years at 4% interest per year ?



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6. At what rate per cent will a sum of money double itself in 6 years ?



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7. Divide ₹1550 into two parts such that if one part is lent out at 15% p.a. and the other at 24% per annum, the total yearly interest income is ₹300.



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8. A man invests ₹2000 for 3 years. He also invests ₹1600 for 3 years at a rate 2% higher than the first one. He earns an interest of



₹996 at the end of 3 years. Find the rates of interest in both the cases.



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9. Find the time in which the simple interest on a sum of money will be  $\frac{4}{5}$  times the principal at 8% per annum.



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10. interest earned on ₹8000 is ₹405 more than the interest earned on ₹6500. If both the sums are invested at the same rate of interest for 3 years, find the rate of interest.



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11. Reena deposited ₹18,000 in a bank. She withdrew ₹5000 after 4 years. At the end of 9 years, she receives an amount of ₹21,220. Find the rate of interest.





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## Exercise 10 1

1. Find the simple interest on :

a. ₹3500 at 4 % p.a. for 5 years.

b. ₹4300 at 6 % p.a. for 3 years.



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2. Find the principal if :

a. the interest is ₹2880 at 8 % p.a. for 3 years.

b. the interest is ₹360 at 5 % p.a. for 4 years.



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**3. Find the rate of interest if :**

a. the interest on ₹1800 for 4 years is ₹432.

b. the interest on ₹2200 for 3 years is ₹330.



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**4. Find the time in which :**

a. ₹2700 will yield an interest of ₹324 at 4 %

p.a.

b. ₹4200 will yield an interest of ₹1000 at 6 %

p.a.



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5. In how much time will the simple interest on a sum of money at 8 % p.a. be  $\frac{2}{5}$  of the principal ?



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6. Interest earned on ₹9000 is ₹400 more than the interest earned on ₹7000. If both the sums are invested at the same rate of interest for 4 years, find the rate of interest.



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7. A sum of money, invested with simple interest, amounts to ₹23,400 in 5 years and to ₹26,640 in 8 years. Find the sum of money and the rate of interest.





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8. A sum of money amounts to ₹14, 880 in 6 years and to ₹16, 320 in 9 years. Find the sum of money and the rate of interest.



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9. a. Divide ₹32, 000 into two parts such that if one part is lent at 6 % p.a. for 3 years and the other at 10 % p.a. for 3 years, the total sum as interest is ₹6840.

b. Divide ₹84,000 into two parts such that if one part is lent at 5% p.a. for 4 years and the other at 8% p.a. for 5 years, the total sum as interest is ₹18,960.



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10. Raman deposited ₹7600 in a bank. He withdrew ₹3000 after 2 years. At the end of 7 years, he receives an amount of ₹7656. Find the rate of interest.



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**11.** A sum of ₹15,500 was deposited by Arnav in a bank. He deposited an additional ₹4000 after 3 years. At the end of 10 years, he receives an amount of ₹30,480. Find the rate of interest.



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**12. a.** A sum of money doubles itself in 4 years at a certain rate of interest. In how many years will it triple itself at the same rate of interest ?

b. A sum of money trebles itself in 6 years at a certain rate of interest. In how many years will it become four times itself at the same rate of interest ?



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**13.** Malti has deposited certain sum in a bank at 3.5 % per annum. The bank announces an increase in the interest rate by 1.5 % p.a. Malti deposits an additional ₹2500 in the bank. The annual interest that Malti receives

now is ₹221, more than what she would have got earlier. Find the original deposit.



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**14.** Puri had invested a certain sum of money in a bank at  $4.5\%$  per annum. The bank reduced the rate of interest by  $0.5\%$  p.a. Puri withdrew ₹4,000 from his account. At the end of the year, the interest he got was ₹200 less than what he would have got had the bank

not reduced the interest rate and he had not withdrawn ₹4000. Find the original deposit.



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## Revision Exercise

1. Find the :

a. Simple interest on ₹1800 at p.a. for 3 years.

b. Principal if the interest is ₹140 at 4% p.a. for 2 years.

c. Rate of interest if the interest on ₹600 for 5

years is ₹150.

d. Time in which ₹10,000 will earn an interest of ₹12600 at 18% p.a.

e. Sum which will amount to ₹4590 at 12% p.a. in 3 years.



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2. Find the time in which the simple interest on a sum of money will be 0.125 times the principal at 10% per annum.



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3. Find the time in which the simple interest at 2% per annum on a sum of money is  $\frac{1}{25}$  of the principal.



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4. Rohit invested ₹10,000 at 18% p.a. Three years later, he invested another ₹5000. What amount will he get after 6 years from the initial investment ?



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5. A sum of money invested at a certain rate of interest doubles itself in 8 years. In how much time will it treble itself at the same interest rate ?



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6. In how much time will a sum of money triple itself at 25 % per annum ?



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7. Divide ₹2500 into two parts such that if one part is lent at 3% for 2 years and the other at 4% for 2 years, then the total interest income is ₹160`.



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8. Mark and Peter borrowed ₹2250 and ₹2500, respectively, at the same rate of simple interest for 3 years. Peter pat ₹45 more as



interest than what Mark paid. Find the rate of interest per annum.



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9. ₹5000 yields ₹100 more as interest than ₹4000, if both the sums are invested at the same rate of interest per annum for 2 years. Find the rate of interest.



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**10.** A sum of money lent out at simple interest amounts to ₹2880 in 2 years and to ₹3600 in 5 years. Find the sum of money and the rate of interest.



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**11.** A sum of money lent out at simple interest amounts to ₹7440 in 3 years and to ₹9360 in 7 years. Find the sum of money and the rate of interest.





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**12.** Manju invested ₹9000 in a bank. She deposited an additional ₹3000 after 2 years. At the end of 3 years, she received ₹13, 200. Find the rate of interest.



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**13.** Prem has deposited some money in a bank 4% per annum. The bank increases the interest rate by 1% p.a. and Prem deposits an

additional ₹3000 in his account. The annual interest he receives at the year end is ₹220 more than what he would have received if the bank had not increased the interest rate and had not deposited additional amount. Find the original deposit.



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**Unit Practice Paper Iii**

1. 25,000 are invested at 15% p.a. for 1 year.

Find the interest at the end of 1 year and also the amount.



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2. Meera borrowed some money at 5% per annum. If she had to pay ₹50 as interest after 2 years. What sum did she borrow ?



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3. At what rate per cent will a sum of money double itself in 10 years ?



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4. A sum of money lent out at simple interest amounts to ₹20, 000 in 1 year and to ₹30, 000 in 5 years. Find the rate of interest and some of money.



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5. Karan deposited a certain sum in a bank at 6% per annum. The bank increases the rate of interest from 6% to 7%. Karan deposits ₹4000 more in his account. The annual interest received by him now is ₹380 more than before. Find his original deposit.



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6. In how much time will the simple interest on certain sum of money at  $7\frac{1}{2}\%$  per annum be  $\frac{6}{5}$  of itself?



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7. Interest earned on ₹20,000 is ₹1600 more than the interest earned on ₹16,000. If both the sums were invested at the same rate of interest for 4 years. Find the rate of interest.



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**Challenge**



1. Divide 3600 into two parts such that if one part is lent at 9 % p.a. and the other at 10 % per annum the total income from interest is 333.

A. ₹2900, ₹900

B. ₹2500, ₹750

C. ₹1700, ₹700

D. ₹2700, ₹900

**Answer: D**



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2. Anil deposited 8000 in a bank. He withdraw 3000 after 2 years. At the end of 4 years he received an amount of 6300. Find the rate of interest.



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