

8th - Comparing Quantities - III

- Amount = principal + interest
 - Simple interest = $\frac{\text{principal} \times \text{rate} \times \text{time}}{100}$
 - Amount = (compound) $A = P \left(1 + \frac{R}{100}\right)^T$
 - Compound interest = $P \left[\left(1 + \frac{R}{100}\right)^T - 1\right]$
 - To find compound interest when interest is compounded half- yearly, we multiply the time period with 2 and rate is taken as half.
 - To find compound interest when interest is compounded quarterly, we multiply the time period with 4 and rate is taken as one fourth
1. Calculate the compound interest that I will get by investing Rs 5000 for 3 years at 10% per annum in the bank.
 2. Calculate the compound interest on Rs 8000 for 2 years at 5% per annum.
 3. Find the compound interest of Rs 6000 for $1\frac{1}{2}$ years at 10% per annum, interest being paid half- yearly.
 4. Find the compound interest on Rs 8000 for one year at 20% per annum, interest being payable quarterly.
 5. Rahim took a loan of Rs 20,000 for 2 years at 12% per annum, the interest being compounded annually. Find the amount at the end of 2 years that he has to pay.
 6. Simple interest on a certain sum of money for 3 years at 5% per annum is Rs 5250. What will be the compound interest on that sum at the same rate for the same period?
 7. Find the compound interest on Rs 25000 after 2 years compounded annually. The rate of interest being 5% per annum for the first year and 6% per annum during the second year.
 8. Find the compound interest on Rs 12000 for $1\frac{1}{2}$ years at 8% per annum compounded semi-annually.
 9. Find the compound interest on Rs 50,000 for 9 months at 8% per annum compounded quarterly.
 10. Find the compound interest on Rs 2,50,000 at the rate of 8% per annum for $1\frac{1}{2}$ years when interest is compounded half- yearly.
 11. Find the compound interest at the rate of 5% per annum for 2 years on that principal which in two years at the same rate gives Rs 800 as simple interest.
 12. The difference between the compound interest and the simple interest on a certain sum of money at 16% per annum compounded annually for 27 months is Rs 616. Find the sum.
 13. In what time will Rs 1800 amount to Rs 2178 at 10% per annum compounded annually?
 14. What sum of money will amount to Rs 4608, when deposited for 2 years at 20% per annum compounded annually?

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15. In a factory, the production of bicycles increased to 55566 from 48000 in 3 years. Find the rate of growth per annum?
16. A washing machine was bought at a price of Rs 14000. Its value depreciates 8% per annum. Find its value after one year.
17. At what rate per cent per annum will Rs 3000 amount to Rs 3993 in 3 years compounded annually?
18. The population of a town was 150000 three years ago. It increases by 2 %, 5% and 8% in the last three years. What is the present population of the town?
19. The present price of a machine is Rs 15,463. If its value depreciates every year by 6%, then find its value before two years.
20. Meena deposited Rs 8000 in post office which pay her 12% interest compounded quarterly. What is the amount which she receives after nine months?
21. Find the compound interest on Rs 62500 at 8% per annum for $2\frac{3}{4}$ years.
22. The present population of a village is 4375. If it increases at the rate of 8% per annum, what will be its population after 2 years?
23. Sonu had purchased a bicycle three years back. Its value depreciated to Rs 1728 at the rate of 20% per annum. For what amount had Sonu purchased the bicycle?

