MATHS

BOOKS - RD SHARMA MATHS (ENGLISH)

COMPOUND INTEREST

Others

1. Find the compound interest on Rs. 1000 for two years at 4% per annum.

Watch Video Solution

2. Maria invests Rs 93750 at $9.6\,\%$ per annum for 3 years and the interest is compounded annually. Calculate.

Watch Video Solution

3. Find the compound interest on Rs 8000 for $1\frac{1}{2}$ years at 10% per annum, interest being payable half-yearly.

Watch Video Solution

4. Find the compound interest on Rs 10000 for 1 year at 20% per annum compounded quarterly.

Watch Video Solution

5. Find the compound interest when principal = Rs 300, rate = 5% per annum and time = 2 years.

Watch Video Solution

6. What will be the compound interest on Rs 4000 in two years when rate of interest is 5% per annum?

 Watch Video Solution

7. Rohit deposited Rs 8000 with a finance company for 3 years at an interest of 15% per annum. What is the compound interest that Rohit gets after 3 years?

Watch Video Solution

8. Find the compound interest on Rs 1000 at the rate of 8% per annum for one and a half years when interest is compound half-yearly.

Watch Video Solution

9. Find the compound interest on Rs 160000 for one year at the rate of 20% per annum, if the interest is compound quarterly.

Watch Video Solution

10. Swati took a loan Rs 16000 against her insurance policy at the rate of 12.5% per annum. Calculate the total compound interest payable by swati after 3 years.

Watch Video Solution

11. Roma borrowed Rs 64000 from a bank for 0.5 years at the rate of 10% per annum. Compute the total compound interest payable

by Roma after 0.5 years, if the interest is compounded half-yearly.

Watch Video Solution

12. Mawa Lal borrowed Rs 20000 from his friend Rooplal at 18% per annum simple interest . He lent it to Rampal at the same rate but compounded annually. Find his gain after 2 years.

Watch Video Solution

13. Find the compound interest on Rs 8000 for 9 months at 20% per annum compounded quarterly.

Watch Video Solution

14. Find the compound interest at the rate of 10% per annum for two years on that principal which in two years at the rate of 10% per annum given Rs 200 as simple interest.

Watch Video Solution

15. Find the compound interest on Rs 64000 for 1 year at the rate of 10% per annum compounded quarterly.

 Watch Video Solution

16. Ramesh deposited Rs 7500 in a bank which pays him 12% interest per annum compounded quarterly. What is the amount which he receives after 9 months?

 Watch Video Solution

17. Anil borrowed a sum of Rs 9600 to install a handpump in his dairy. If the rate of interest is 5.5% per annum compounded annually, determine the compound interest which anil will have to pay after 3 years.

Watch Video Solution

18. Surabhi borrowed a sum of Rs 12000 form a finance company to purchase a refrigerator. If the rate of interest is 5% per annum

compounded annually, calculate the compound interest that Surabhi has to pay to the company after 3 years.

 Watch Video Solution

19. Diljit received a sum of Rs 40000 as a loan from a finance company. If the rate of interest is 7% per annum compounded annually, calculate the compound interest that Diljit pays after 2 years.

 Watch Video Solution

20. Find the compound interest on Rs 12000 for 3 years at 10% per annum compounded annually.

21. Abhay lent Rs 8000 to his friend for 3 years at the rate of 5% per annum compound interest. What amount does Abhay get after 3 years?

22. Vijay obtains a loan of Rs. 64000 against his fixed deposits. If the rate of interest by 2.5 paise per rupee per annum, calculate the compound interest payable after 3 years.

 Watch Video Solution

23. Find the compound interest at the rate of 10% per annum for four years on the principal

which in four years at the rate of 4% per annum given Rs 1600 as simple interest.

24. Simple interest on a sum of money for 3 years at 10% per annum is Rs 2400. What will be the compound interest on that sum at the same rate for the same period?

25. Compute the compounded interest on Rs 12000 for 2 years at 20% per annum when compounded half-yearly.

 Watch Video Solution

26. Find the compound interest on Rs 1000 at the rate of 10% per annum for 18 months when interest is compounded half-yearly.

 Watch Video Solution

27. How much would a sum of Rs 16000 amount to is 2 years time at 10% per annum compound interest, interest being payable half-yearly?

 Watch Video Solution

28. Find the compound interest on Rs 320000 for one year at the rate of 20% per annum, if the interest is compounded quarterly.

 Watch Video Solution

29. Ramesh deposited Rs 7500 in a bank which pays him 12% interest per annum compounded quarterly. What is the amount which he receives after 9 months?

Watch Video Solution

30. Shyam deposited in a bank Rs 7500 for 6 months at the rate of 8% interest compounded quarterly. Find the amount he received after 6 months.

Watch Video Solution

31. Ram Singh busy a refrigerator for Rs 4000 on credit. The rate of interest for the first year is 5% and of the second year is 15%. How much will it cost him if he pays the amount after two years?

Watch Video Solution

32. Find the compound interest on Rs 24000 at 15% per annum for 2 1/3 years.

Watch Video Solution

33. Compute the amount and the compound interest in each of the following by using the formulas when: (a)Principal = Rs 3000, Rate = 5%, time = 2 years . (b)Principal = Rs 3000, rate = 18%, time = 2 years . (c)Principal = Rs 5000, rate = 10 %, time – 2 years (d)Principal = Rs 2000, rate = 4%, time = 3 years (e)Principal = Rs 10000, rate 20% per annum compounded half-yearly, time = 2 years (f)Principal = Rs 160000,

rate = 10 paise per rupee per annum compounded half-yearly, time = 2 years.

Watch Video Solution

34. Find the amount of Rs 2400 after 3 years, when the interest is compounded annually at the rate of 20% per annum.

Watch Video Solution

35. Rahman lent Rs 16000 to Rasheed at the rate of 12% per annum compound interest. Find the amount payable by Rasheed to Rahman after 3 years.

Watch Video Solution

36. Meera borrowed a sum of Rs 1000 from Sita for two years. If the rate of interest is 10% compounded annually, find the amount that Meera has to pay back

Watch Video Solution

37. Find the difference between the compound interest and simple interest. On a sum of Rs. 50,000 at 10% per annum for 2 years.


Watch Video Solution

38. Amit borrowed Rs 16000 at 15/2% simple interest .On the same day, he lent it to ashu at the same rate but compounded annually. What does he gain at the end of 2 years?

Watch Video Solution

39. Find the amount and the compound interest on Rs 4096 for if he gave it for 18 months at 25/2 % per annum, the interest being compounded semi-annually.

Watch Video Solution

40. Find the amount and the compound interest on Rs 8000 for years at 10% per

annum, compounded half-yearly.

Watch Video Solution

41. Kamal borrowed Rs 57600 from LIC against her policy at $12\frac{1}{2}\%$ per annum to build a house. Find the amount that she pays to the LIC after $1\frac{1}{2}$ years if the interest is calculated half-yearly.

Watch Video Solution

42. Abha purchased a house from Avas Parishad on credit. If the cost of the house is Rs 64000 and the rate of interest is 5% per annum compounded half-yearly, find the interest paid by Abha after one year and a half.

Watch Video Solution

43. Rakesh lent out Rs 10000 for 2 years at 20% per annum, compounded annually. How

much more he could earn if the interest be compounded half-yearly?

Watch Video Solution

44. Romesh borrowed a sum of Rs 245760 at 12. 5% per annum, compounded annually. On the same day, he lent out his money to Ramu at the same rate of interest, but compounded semi-annually. Find his gain after 2 years.

Watch Video Solution

45. Find the amount that David would receive if he invests Rs 8192 for 18 months at 12.5% per annum, the interest being compounded half-yearly.

 Watch Video Solution

46. Find the compound interest on Rs 15625 for 9 months, at 16% per annum, compounded quarterly.

 Watch Video Solution

47. Rekha deposited Rs 16000 in a foreign bank which pays interest at the rate of 20% per annum compounded quarterly, find the interest received by Rekha after one year.

Watch Video Solution

48. Find the amount of Rs 12500 for 2 years compound annually, the rate of interest being 15% for the first year and 16% for the second year.

Watch Video Solution

49. Ramu borrowed Rs 15625 from a finance company to buy a scooter. If the rate of interest be 16% per annum compounded annually, what payment will he have to make after $2\frac{1}{4}$ years?

Watch Video Solution

50. What will Rs 125000 amount to at the rate of 6%, if the interest is calculated after every

four months?

Watch Video Solution

51. Find the compound interest at the rate of 5% for three years on that principal which in three years at the rate of 5% per annum given Rs 12000 as simple interest.

Watch Video Solution

52. A sum of money was lent for 2 years at 20% compounded annually. If the interest is payable half-yearly instead of yearly, then interest is Rs 482 more. Find the sum.

Watch Video Solution

53. Simple interest on a sum of money for 2 years at 6.5% per annum is Rs 5200. What will be the compound interest on the sum at the same rate for the same period?

Watch Video Solution

54. Find the compound interest at the rate of 5% per annum for 3 years on that principal which in 3 years at the rate of 5% per annum given Rs 1200 as simple interest.

Watch Video Solution

55. Find the principal, if the compound interest compound annually at the rate of 10% per annum for three years is Rs 331.

Watch Video Solution

56. What sum will become Rs 9826 in 18 months if the rate of interest is 5/2 % per annum and the interest is compounded half-yearly?

Watch Video Solution

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

of money at 10% per annum for 2 years is Rs 500. Find the sum when the interest is compounded annually.

 Watch Video Solution

58. In what time will Rs 800 amount to Rs 882 at 5% per annum compounded annually ?

 Watch Video Solution

59. In what time will Rs 64000 amount to Rs 68921 at 5% per annum, interest being compounded half-yearly?

 Watch Video Solution

60. At what rate percent per annum compound interest will Rs 10000 amount to Rs 13310 in three years ?

 Watch Video Solution

61. Reena borrowed from Kamal certain sum for two years at simple interest. Reena lent this sum to Hamid at the same rate for two years compound interest. At the end of two years she received Rs 110 as compound interest but paid Rs 100 as simple interest. Find the sum and rate of interest.

Watch Video Solution

62. On what sum will the compound interest at 5% per annum for 2 years compounded

annually be Rs 164?

 Watch Video Solution

63. Find the principal if the interest compounded annually at the rate of 10% for two years is Rs 210.

 Watch Video Solution

64. A sum amounts to Rs 756.25 at 10% per annum in 2 years, compounded annually. Find

the sum.

Watch Video Solution

65. What sum will amount to Rs 4913 in 18 months, if the rate of interest is $12\frac{1}{2}\%$ per annum, compounded half-yearly?

Watch Video Solution

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

at 15% per annum for 3 years is Rs 283.50. Find the sum.

 Watch Video Solution

67. Rachana borrowed a certain sum at the rate of 15% per annum. If she paid at the end of two years Rs 1290 as interest compounded annually, find the sum she borrowed.

 Watch Video Solution

68. The interest on a sum of Rs 2000 is being compounded annually at the rate of 4% per annum. Find the period for which the compound interest is Rs 163.20.

Watch Video Solution

69. In how much time would Rs 5000 amount to Rs 6655 at 10% per annum compound interest?

Watch Video Solution

70. In what time will Rs 4400 become Rs 4576 at 8% per annum interest compounded half-yearly?

Watch Video Solution

71. The difference between the S.I. and C.I. on a certain sum of money for 2 years at 4% per annum is Rs 20. Find the sum.

Watch Video Solution

72. In what time will Rs 1000 amount to Rs 1331 at 10% per annum, compounded annually?

Watch Video Solution

73. At what rate percent compound interest per annum will Rs 640 amount to Rs 774.40 in 2 years?

Watch Video Solution

74. Find the rate percent per annum if Rs 2000 amount to Rs 2662 in 1.5 years, interest being compounded half-yearly?

 Watch Video Solution

75. Kamala borrowed from rattan a certain sum at a certain rate for two years simple interest. She lent this sum at the same rate to Hari for two years compound interest. At the end of two years she received Rs 210 as

compound interest, but paid Rs 200 only as simple interest. Find the sum and the rate of interest.

Watch Video Solution

76. Find the rate percent per annum, if Rs 2000 amount to Rs 2315.25 in an year and a half, interest being compounded six monthly.

Watch Video Solution

77. Find the rate at which a sum of money will double itself in 3 years, if the interest is compounded annually.

 Watch Video Solution

78. Find the rate at which a sum of money will become four times the original amount in 2 years, if the interest is compounded half-yearly.

 Watch Video Solution

79. A certain sum amounts to Rs 5832 in 2 years at 8% compounded interest. Find the sum.

Watch Video Solution

80. The difference between the compound interest and simple interest on a certain sum for 2 years at 7.5% per annum is Rs 360. Find the sum.

Watch Video Solution

81. The difference in simple interest and compound interest on a certain sum of money at $6\frac{2}{3}\%$ per annum for 3 years is Rs 46. Determine the sum.

Watch Video Solution

82. Ishita invested a sum of Rs 12000 at 5% per annum compound interest. She received an

amount of Rs 13230 after n years. Find the value of n .

Watch Video Solution

83. At what rate percent per annum will a sum of Rs 4000 yield compound interest of Rs 410 in 2 years?

Watch Video Solution

84. A sum of money deposited at 2% per annum compounded annually become Rs 10404 at the end of 2 years. Find the sum deposited.

85. In how much time will a sum of Rs 1600 amount to Rs 1852.20 at 5% per annum compound interest?

86. At what rate percent will a sum of Rs 1000 amount to Rs 1102.50 in 2 years at compound interest?

 Watch Video Solution

87. The compound interest on Rs 1800 at 10% per annum for a certain period of time is Rs 378. Find the time in years.

 Watch Video Solution

88. What sum of money will amount to Rs 45582.25 at $6\frac{3}{4}\%$ per annum in two years, interest being compounded annually?

Watch Video Solution

89. Sum of money amounts to Rs 453690 in 2 years at 6.5% per annum compounded annually. Find the sum.

Watch Video Solution

90. The population of a town is increasing at the rate of 5% per annum. What will be the population of the town on this basis after two years, if the present population is 16000?

Watch Video Solution

91. The population of a village is 20000. If the annual birth rate is 4% and the annual death rate 2%, calculate the population after two years.

Watch Video Solution

92. The population of a town was 160000 three years ago. If it had increased by 3%, 2.5% and 5% in the last three years, find the present population of the town.

Watch Video Solution

93. The present population of a city is 9261000. If it had been increasing at the rate of 5% per annum, find its population 3 years ago.

Watch Video Solution

94. In a factory the production of scooters rose to 48400 from 40000 in 2 years. Find the rate of growth per annum.

Watch Video Solution

95. The bacteria in a culture grows by 10% in the first hour, decreases by 10% in the second hour and again increases by 10% in the third hour. If the original count of the bacteria in a

sample is 10000, find the bacteria count at the end of 3 hours.

Watch Video Solution

96. Ashish opened a bookshop with an initial investment of Rs 32000. In the first year, he incurred a loss of 5%. However, during the second year, he earned a profit of 10% which in the third year rose to Calculate his net profit for the entire period of three years.

Watch Video Solution

97. 10000 workers were employed to construct a river bridge In four years. At the end of first year, 10% workers were retrenched. At the end of the second year, 5% of the workers at that time were retrenched. However to complete the project in time, the number of workers was increased by 10% at the end of the third year. How many workers were working during the fourth year?

 Watch Video Solution

98. 24000 blood donors were registered with a charitable hospital. The number of donors increased at the rate of 5% every six month. Find the time period at the end of which the total number of blood donors becomes 27783.

Watch Video Solution

99. A factory increased its production of three wheelers from 80000 in 1999 to 92610 in 2002. Find the annual rate of growth of production of three wheelers.

Watch Video Solution

100. Given that carbon-14 decays at a constant rate in such a way that it reduces to 50% in 5568 years, find the age of an old wooden piece in which the carbon is only 12.5% of the original. $15836\,years$ b. $16668\,years$ c. $16704\,years$ d. $17552\,years$

Watch Video Solution

101. The present population of a town is 28000. If it increases at the rate of 5% per annum, what will be its population after 2 years?

Watch Video Solution

102. The population of a city is 125000. If the annual birth rate and death rate are 5.5% and 3.5% respectively, calculation the population of city after 3 year.

Watch Video Solution

103. The present population of a town is 25000. It grows at 4%, 5% and 8% during first year, second year and third year respectively. Find its population after 3 years.

Watch Video Solution

104. Three years ago, the population of a town was 50000. If the annual increase during three

successive years be at the rate of 4% , 5% and 3 % respectively, find the present population.

Watch Video Solution

105. There is a continuous growth in population of a village at the rate of 5% per annum. If its present population is 9261, what it was 3 years ago?

Watch Video Solution

106. In a factory the production of scooters rose to 46305 from 40000 in 3 years. Find the annual rate of growth of the production of scoters.

Watch Video Solution

107. The annual rate of growth in population of a certain city is 8%. If its present population is 1,96,830, what was the population three years ago?

Watch Video Solution

108. The population of a town increases at the rate of 50 per thousand. Its population after 2 years will be 22050. Find its present population.

Watch Video Solution

109. The count of bacteria in a culture grows by 10% in the first hour, decreases by 8% in the second hour and again increases by 12% in

the third hour. If the count of bacteria in the sample is 13125000, what will be the count of bacteria after 3 hours?

 Watch Video Solution

110. The population of a certain city was 72000 on the last day of the year 1998. During next year it increased by 7% but due to an epidemic it decreased by 10% in the following year. What was its population at the end of the year 2000?

Watch Video Solution

111. 6400 workers were employed to construct a factory in 4 years. A the end of the first year, 25% workers were retrenched. At the end of the second year, 25% of those working at that time were again retrenched. However, to complete the project in time, the number of workers was increased by 25% of the total number of workers left at the end of third year. How many workers were working during the fourth year ?

Watch Video Solution

112. Aman started a factory with an initial investment of Rs 100000. In the first year, he incurred a loss of 5%. However, during the second year, he earned a profit of 10% which in the third year rose to 12%. Calculate his net profit for the entire period of three years.

Watch Video Solution

113. The population of a town increases at the rate of 40 per thousand annually. If the present population be 175760, what was the population three years ago.

Watch Video Solution

114. The production of a mixi company in 1996 was 8000 mixies. Due to increase in demand it increases its production by 15% in the next two years and after two years its demand

decreases by 5%. What will be its production after 3 years ?

Watch Video Solution

115. The population of a city increases each year by 4% of what it had been at the beginning of each year. If the population in 1999 had been 6760000, find the population of the city in (i) 2001 (ii) 1997.

Watch Video Solution

116. Jitendra set up a factory by investing Rs 2500000. During the first two successive years his profits were 5% and 10% respectively. If each year the profit was on previous year's capital, compute his total profit.

Watch Video Solution

117. The value of a residential flat constructed at a cost of Rs 100000 is depreciating at the rate of 10% per annum. What will be its value 3 years after construction?

Watch Video Solution

118. A new car costs Rs 360000. Its price depreciates at the rate of 10% a year during the first two years and at the rate of 20% a year thereafter. What will be the price of the car after 3 years?

Watch Video Solution

119. The present price of car is Rs.7290/-. If its value decreased every year by 10%, then its value three years back was

Watch Video Solution

120. The value of a flat worth Rs. 500000 is depreciating, at the rate of 10% p.a. In how many years will it' value be reduced to Rs. 364500? $3\,years$ b. $4\,years$ c. $5\,years$ d. $6\,years$

Watch Video Solution

121. The value of a property increases every year at the rate of 5%. If its value at the end of 3 years be Rs 411540, what was its original value at the beginning of these years?

Watch Video Solution

122. Afridi purchased an old scooter for Rs 16000. If the cost of scooter after 2 years

depreciates to Rs 14440, find the rate of depreciation.

123. Ms. Cherian purchased a boat for Rs 16000. If the total cost of the boat is depreciating at the rate of 5% per annum, calculate its value after 2 years.

124. The value of a machine depreciates at the rate of 10% per annum. What will be its value 2 years hence, if the present value is Rs 100000? Also, find the total depreciation during this period.

 Watch Video Solution

125. Pritam bought a plot of land for Rs 640000. Its value is increasing by 5% of its

previous value after every six month. What will be the value of the plot after 2 years?

Watch Video Solution

126. Mohan purchased a house for Rs 30000 and its value is depreciating at the rate of 25% per year. Find the value of the house after 3 years.

Watch Video Solution

127. The value of a machine depreciates at the rate of 10% per annum. It was purchased 3 years ago. If its present value is Rs 43740, find its purchased price.

Watch Video Solution

128. The value of a refrigerator which was purchased 2 years ago, depreciates at 12% per annum. If its present value is Rs 9680, for how much was it purchased?

Watch Video Solution

129. The cost of a T.V. set was quoted Rs 17000 at the beginning of 1999. In the beginning of 2000 the price was hiked by 5%. Because of decrease in demand the cost was reduced by 4% in the beginning of 2001. What was the cost of the T.V. set in 2001?

Watch Video Solution

130. Ashish started a business with an initial investment of Rs. 500000. In the first year, he incurred a loss of 4%. However, during the second year, he earned a profit of 5% which in the third year rose to 10%. Calculate his net profit for the entire period of three years. a) $Rs.48800$ b. $Rs.54400$ c. $Rs.55000$ d. none of these

Watch Video Solution