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A COMPLETE EXAM GUIDER

Simple Interest Practice Questions

Chennai: #1, South Usman Road, T Nagar. | **Madurai**: #24/21, Near Mapillai Vinayagar Theatre, Kalavasal. | **Trichy**: opp BSNL office, Juman Center, 43 Promenade Road, Cantonment. | **Salem**: #209, Sonia Plaza / Muthu Complex, Junction Main Rd, State Bank Colony, Salem. | **Coimbatore** #545, 1st floor, Adjacent to SBI (DB Road Branch), Diwan Bahadur Road, RS Puram, Coimbatore (Kovai) – 641002 | **Chandigarh**: SCO 131-132 Sector 17C. | **Bangalore.**

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Q.1) An amount of Rs. 400 becomes Rs. 424 in 3 years at a certain rate of simple interest, If the rate of interest increases by 8%, what amount will Rs. 400 becomes in 2 years?

a) Rs.450 b) Rs.425 c) Rs.480
d) Data inadequate e) None of these

Q.2) Harshan took a loan at a rate of simple interest 7% in the year with an increase of 0.25% in each subsequent year. He paid interest of Rs. 4425 after 4 years. How much loan did he take?

a) Rs.15500 b) Rs.15250 c) Rs.15200
d) Rs.15000 e) None of these

Q.3) A lends 30% of sum at 30% p.a. 50% of sum at 14% p.a. and the remaining sum at 12% p.a. rate of interest. What would be the rate of interest, if the interest is calculated on the whole sum?

a) 18.1% p.a. b) 19.3% p.a.
c) 12.4% p.a. d) 17.6% p.a.
e) None of these

Q.4) Ram invested some amount at the rate of 15% simple interest and a certain amount at the rate of 20% simple interest. He received yearly interest of Rs.1900.But if he had interchanged the amounts invested, he would have received Rs.550 more as interest. How much did he invest at 20% simple interest?

a) Rs.7106.5 b) Rs.7142.8
c) Rs.7116.5 d) Rs.7654.5
e) None of the Above

Q.5) Divide Rs. 8000 into two parts so that simple interest on first part for 3 year at 5% p.a. may be equal to simple interest on the second part for 5 year at 9% p.a.

a) Rs.5000, Rs.3000
b) Rs.6500, Rs.1500
c) Rs.6000, Rs.2000
d) Rs.4500, Rs.3500
e) None of these

Q.6) A sum of money at simple interest amounts to Rs. 14160 in 3 year. If the rate of interest is increased by 25%, the same sum amount to Rs. 14700 in the same time. The rate of interest is

a) 5% b) $\frac{1}{2}$% c) 6%
d) 7% e) None of these

Q.7) A sum of Rs. 11000 is equally divided and invested at two different rates of interest. The difference between the interests got after 3 year is Rs. 300. What is the difference between the rates of interest?

a) 1.81% b) 1.75% c) 1.69%
d) 1.32% e) None of these

Q.8) Harvey borrowed some money at the rate of 3% p.a. for the first 4 year, at the rate of 4% p.a. for the next 3 year and at the rate of 9% p.a. for the period beyond 7 year. If he pays a total simple interest of Rs. 21000 at the end of 9 year, how much money did he borrow?

a) Rs. 49500 b) Rs. 48500c) Rs. 49900
d) Rs. 50000 e) None of these

Q.9) An equal amount of sum is invested in two schemes for 5 years each, both offering simple interest. The interest amount obtained at 14% is Rs.1000 more than that obtained at 10%. What is the total sum invested?

a) Rs.9000 b) Rs.9500 c) Rs.12200
d) Rs.14000 e) Rs.10000

Q.10) Ashok lent Rs.7000 to Ram for 3 years and Rs.4000 to Harish for 2 years on simple interest and at same rate of interest. If Ashok received Rs.3000 as total interest from both, what is the rate of interest?

a) 10.81% b) 10.37% c) 10.99%
d) 10.75% e) 10.34%

Q.11) Graham lent sum of Rs.840 to Rajesh in the beginning of the year at a certain rate of interest. After 6 months Rs.420 is lent to the same person but the rate of interest is twice the former. At the end of the year Rs.80 is earned as total interest by graham then what is the original rate of interest.

a) 7.85% b) 5.45% c) 6.34%
d) 7.46% e) 5.64%

Q.12) What annual instalment will discharge a debt of Rs.1053 due in 3 years at 8% simple interest?

a) 324 b) 325 c) 320
d) 330 e) 328

Q.13) Stokes gave a loan of Rs. 400 to Rashid and recovered it at the rate of Rs. Rs.100 each month for six months, commencing from the end of 1st month. What is the effective rate of simple interest per annum?

a) 115% b) 100% c) 95%
d) 80% e) 50%

Q.14) Find the amount of equal instalment, annual payment of which will discharge a debt of Rs. 406 due in 2 years at 3% p.a. of Simple interest.

a) 240 b) 234 c) 334
d) 200 e) 340

Q.15) Find the amount of debt that will be discharged by equal installments of Rs. 150 each, if the debt is due in 4 year at 2% p.a.

a) 618 b) 634 c) 674
d) 650 e) 640

Q.16) Vidal borrows Rs. 50,000 from a bank at 5% p.a. simple interest and clears the debt in five years. If the installments paid at the end of the first, second, third and fourth years to clear the debt are Rs. 5,000, Rs. 10,000, Rs. 15,000 and Rs. 20,000 respectively, what amount should be paid at the end of the fifth year to clear the debt?

a) Rs 8,000 b) Rs 7,500 c) Rs 7,000
d) Rs 5,900 e) Rs 6,000

Q.17) The simple interest on a sum of money will be Rs.900 after 8 years. If the principal is tripled for the last 4 years, what will be the total interest at the end of the 8^{th} year?

a) Rs.600 b) Rs.900 c) Rs.1200
d) Rs.1800 e) Data inadequate

Q.18) A certain sum of money at simple interest amounts to Rs.1100 in 3 years and to Rs.1460 in 6 years. The rate percent per annum is:

a) 27% b) 16% c) 25%
d) 11% e) 34%

Q.19) Two equal amounts of money are deposited in two banks, each at 9% per annum, for $4\frac{1}{2}$ and $6\frac{1}{2}$ years. If the difference between their interests is Rs.288, each sum is:

a) Rs.1600 b) Rs.1500 c) Rs.1640
d) Rs.1720 e) Rs.1540

Q.20) Rajesh has a total of Rs.42,000. And in that, he lends Rs.8,000 at 9/2% per annum simple interest and Rs.12,000 at 8% per annum simple interest. He lends the remaining money at a certain rate of interest so that he gets total interest of Rs. 3600 at the end of one year. The rate of interest per annum, at which the remaining money is lent, is?

a) 11.50% b) 10.36% c) 8.54%
d) 9.65% e) 12.24%

Q.21) Lawrence invests Rs.12000 as fixed deposit in a bank at the rate of SI 8% per annum. But due to some needs he has to withdraw the entire money after 4 years, for which the bank allowed him a lower rate of interest. If he gets Rs. 2500 less than what he would have got at the end of 6 years, the rate of interest allowed by the bank is

a) 7.5% b) 8.3% c) 8.5%
d) 9.6% e) 6.8%

Q.22) An equal amount of sum is invested in two schemes for 8 year each, both offering simple interest. When invested in scheme A at 12% p.a. the sum gives an amount of Rs. 4500. In scheme B, invested at 16% p.a. it gives an interest of Rs. 6000. What is the total sum invested?

a) Rs.9375 b) Rs.9500 c) Rs.10000
d) Rs.8400 e) Rs.7500

Q.23) Prakash lent Rs.9000 to Ram for 4 years and Rs.6000 to Harish for 2 years on simple interest and at same rate of interest. If Prakash received Rs.2500 as total interest from both, What is the rate of interest?

a) 5.80% b) 5.30% c) 5.20%
d) 5.75% e) 5.35%

Q.24) Mahesh lent sum of Rs.960 to Rajesh in the beginning of the year at certain rate of interest. After 4 months Rs.480 is lent to the same person but the rate of interest is twice the former. At the end of the year Rs.120 is earned as total interest by Mahesh Then what is the original rate of interest.

a) 9.85% b) 8.45% c) 7.39%
d) 9.37% e) 9.64%

Q.25) What annual installment will discharge a debt of Rs.1134 due in 3 years at 5% simple interest?

a) 390 b) 360 c) 380
d) 370 e) 340

Q.26) Mathews gave a loan of Rs. 1200 to Antony and recovered it at the rate of Rs. 180 each month for eight months, commencing from the end of 1st month. What is the effective rate of simple interest per annum?

a) 38% b) 42% c) 33%
d) 45% e) 30%

Q.27) The rate of Simple Interest in PNB & UCO are in the ratio of 4:5. Krishnan wants to deposit his total savings in two banks in such a way that he receives equal half-yearly interest from both banks. He should deposit in both banks PNB & UCO in the ratio of

a) 4:5 b) 7:5 c) 5:8
d) 8:5 e) 5:4

Q.28) Deshmukh borrows a sum of Rs.4000 at the beginning of a year. After four months Rs.2000 more is borrowed at a rate of interest double times the previous one. At the end of one year, the sum of interest on both the loans is Rs.576. What is the first rate of interest per annum?

a) 4.8% b) 5.7% c) 6.5%
d) 8.2% e) None of the Above

Q.29) A watch is sold for Rs.540 cash or for Rs.240 cash down payment together with Rs.324 to be paid after one month. Find the rate of interest charged in the installment scheme.

a) 8% b) 8.5% c) 10%
d) 9.5% e) 12%

Q.30) Find the amount of debt that will be discharged by 9 equal installments of Rs. 220 each, if the debt is due in 6 years at 3 % p.a.

a) 1149 b) 1419 c) 1491
d) 1941 e) 1194

Q.31) Butler borrows Rs 60,000 from a bank at 6% p.a. simple interest and clears the debt in five years. If the installments paid at the end of the first, second, third and fourth years to clear the debt are Rs 6,000, Rs 12,000, Rs 18,000 and Rs 24,000 respectively, what amount should be paid at the end of the fifth year to clear the debt?

a) Rs 13200 b) Rs 11400 c) Rs 11000
d) Rs 11200 e) Rs 10800

Q.32) A certain sum of money at simple interest amounts to Rs.1350 in 5 years and to Rs.1490 in 7 years. The amount after 3 years is:

a) Rs.1210 b) Rs.1350 c) Rs.1200
d) Rs.1170 e) Data inadequate

Q.33) A certain sum of money at simple interest amounts to Rs.1500 in 4 years and to Rs.1860 in 7 years. The rate percent per annum is:

a) 8.27% b) 7.54% c) 11.76%
d) 8.54% e) 8.49%

Q.34) Two equal amounts of money are deposited in two finance institutes, each at 7% per annum, for $3\frac{1}{2}$ and $4\frac{1}{2}$ years. If the difference between their interests is Rs.84, each sum is:

a) Rs.1600 b) Rs.1500 c) Rs.1200
d) Rs.1720 e) Rs.1540

Q.35) Verma has a total of Rs. 24,000. And in that, he lends Rs. 6,000 at $\frac{7}{2}$% per annum simple interest and Rs. 8,000 at 6% per annum simple interest. He lends the remaining money at a certain rate of interest so that he gets total annual interest of Rs. 3200 at the end of a year. The rate of interest per annum, at which the remaining money is lent, is?

a) 15.5% b) 25.1% c) 18.5%
d) 29.6% e) 22.2%

Q.36) Murugan invests Rs. 4500 as fixed deposit at a bank at the rate of $3\frac{1}{2}$% per

annum SI. But due to some needs he has to withdraw the entire money after 2 $\frac{1}{2}$ years, for which the bank allowed him a lower rate of interest. If he gets Rs 281.25 less than what he would have got at the end of 5 years, the rate of interest allowed by the bank is

a) 7.5% b) 4.3% c) 3.5%
d) 4.5% e) 6.8%

Q.37) If Rs. 486 becomes Rs. 544 in 6 yr at certain simple rate of interest. If the rate of interest increases by 5%, what amount will Rs. 486 become in 3 yr.?

a) Rs.560 b) Rs.585 c) Rs.588
d) Data inadequate e) None of these

Q.38) Abhishek took a loan at simple interest rate of 6% in the year with an increase of 0.5% in each subsequent year. He paid interest of Rs. 6125 after 5 year. How much loan did he take?

a) Rs.17500 b) Rs.17250 c) Rs.17200
d) Rs.18000 e) None of these

Q.39) A lends 25% of sum at 14% p.a. 30% of sum at 18% p.a. and the rest sum at 16% p.a. rate of interest. What would be the rate of interest, if the interest is calculated on the whole sum?

a) 18.1% p.a. b) 17.3% p.a.
c) 16.1% p.a. d) 19.6% p.a.
e) None of these

Q.40) Sneha invested some amount at the rate of 15% simple interest and a certain amount at the rate of 25% simple interest. She received yearly interest of Rs.2300.But if she had interchanged the amounts invested, She would have received Rs.425 more as interest. How much did she invest at 25% simple interest?

a) Rs.4500.50 b) Rs.4156.25
c) Rs.4943.75 d) Rs.5000
e) None of the Above

Q.41) Divide Rs. 8000 into two parts so that simple interest on first part for $2\frac{1}{2}$ years at 3% p.a. may be equal to simple interest on the second part for $4\frac{1}{2}$ years at 1% p.a.

a) Rs.3200, Rs.4800
b) Rs.3300, Rs.4700
c) Rs.6000, Rs.2000
d) Rs.3000, Rs.5000
e) None of these

Q.42) An amount of Rs. 16600 is divided equally and each is invested at two different rates of interest. The difference between the interests got after 4 year is Rs. 700. What is the difference between the rates of interest?

a) 2.28% b) 2.37% c) 2.99%
d) 2.75% e) 2.10%

Q.43) A sum of money becomes $\frac{9}{5}$ of itself in 4 years at a certain rate of interest. The rate percent per annum is:

a) 25% b) 20% c) 10%
d) 12% e) 15%

Q.44) What annual installment will discharge a debt of Rs.773.5 due in 4 years at 7% simple interest?

a) 190 b) 260 c) 180
d) 270 e) 175

Q.45) A took a loan at simple interest rate of 5% in the year with an increase of 0.75% in each subsequent year. He paid interest of Rs.3864 after 3 year. How much loan did he take?

a) Rs.27500 b) Rs.22250 c) Rs.27200
d) Rs.23400 e) Rs.22400

Q.46) A sum of money will double itself in 5 years at simple interest with yearly rate of:

a) 10% b) 20% c) 18%
d) 16% e) 15%

Q.47) Ganesh borrowed Rs.7500 from Dinesh at simple interest. After 6 years Dinesh received Rs 2000 more than the amount to Ganesh on loan. Then what is the rate of interest?

a) 2.33% b) 4.44% c) 3.83%
d) 4.56% e) 3.15%

Q.48) The sum of money that will give Rs.3 as interest per day at 6% per annum simple interest is:

a) 17890 b) 19835 c) 19830
d) 18250 e) 14550

Q.49) Guru deposits Rs.8000 in a financial institute at 12% interest per annum for a period of one year and Rs.6500 in another financial institute at 9% per annum for a period of one year. The total interest amount obtained is what percentage of the whole sum?

a) 13.23% b) 12.45% c) 13.43%
d) 10.65% e) 13.15%

Q.50) The simple interest on a sum of money is equal to the principal and the number of years is equal to the rate percent per annum. Find the rate percent

a) 15% b) 12% c) 10%
d) 19% e) 20%

Q.51) What annual installment will discharge a debt of Rs.1270 due in 5 years at 9% simple interest.

a) 190 b) 260 c) 180
d) 270 e) 175

Q.52) A certain amount is invested for certain period. It amounts to Rs.550 at 12% per annum but invested at 7% per annum, Its amounts to Rs.530, find the time.

a) 10 months b) 16 months
c) 18 months d) 13 months
e) 15 months

Q.53) Rajiv lent an amount of Rs.18000 to his neighbours namely Giri, Ganesh, and Yadav in the ratio 2:3:4 with the rate of interest 5%, 7% and 9% respectively. Find the total interest received by Rajiv at the end of 2 years

a) 1990 b) 2680 c) 2180
d) 2570 e) 2120

Q.54) Kathiresan has Rs.2400, part of which he lent at 3.5 percent and rest at 4.5 percent. The whole annual interest was Rs.88.how much he lent at 3.5 percent

a) 1900 b) 1880 c) 1180
d) 2000 e) 2400

Q.55) Rs.1400 amounts to Rs 1764 in 5 years at a certain rate of simple interest. If the rate of interest is increased by 3%,it would amount to how much

a) 1984 b) 1784 c) 1884
d) 1974 e) 1654

Q.56) A certain sum of money amounted to Rs.1440 at 7% in a time which Rs.840 amounted to Rs.1120 at 5%.If the rate of interest is simple. Find the sum.

a) 884 b) 784 c) 874
d) 982 e) 964

Q.57) If Rs.8010 is divided in to three parts such that their amounts after 2 3 and 4 years respectively are equal, the simple interest being at the rate of 2% per annum. Find the difference between the greatest and smallest parts of the sum

a) 104 b) 124 c) 101
d) 152 e) 163

Q.58) The amount of a certain sum with simple interest for 10 years is Rs.293.20 and with same interest rate for 5 years more is 348.175.Find the rate percent per annum at which interest is reckoned.

a) 7.5% b) 6.5% c) 6%
d) 9% e) 12%

Q.59) Murali borrows Rs.3500 from a bank at SI. After 3 years he paid Rs.1500 to the bank and at the end of 5 yrs from the date of borrowing he paid Rs.2725 to the bank to settle the account. Find the rate of interest.

a) 7% b) 6% c) 9%
d) 5% e) 8%

Q.60) Out of a certain sum, one fourth is invested at 5%,one third is invested at 7% and the rest at 9%.If the simple interest for 2 years from all these investments amounts to Rs.880.find the original sum.

a) 8400 b) 7500 c) 6000
d) 7000 e) 5400

Q.61) When a bank reduce the rate of interest from $5\frac{1}{2}$% per annum to $4\frac{1}{2}$% per annum, depositor withdrew Rs.750 and thereby his interest reduced by 85. Find the initial deposit?

a) 6255 b) 5125 c) 6765
d) 7765 e) 5465

Q.62) On Rs.4000 invested at simple interest at rate of 5% per annum, Rs.1200 is obtained as interest in certain years. In order to earn Rs.2000 as interest on Rs.5000 in same number of years what should be rate of simple interest

a) 6.67% b) 7.67% c) 8.67%
d) 5.76% e) 8.98%

Q.63) What annual installment will discharge a debt of Rs.1431 due in 5 years at 4% simple interest.

a) 290 b) 265 c) 285
d) 270 e) 279

Q.64) A certain amount is invested for certain period. It amounts to Rs.750 at 8% per annum but invested at 5% per annum its amounts to Rs.715, find the time.

a) 1 year 9 months
b) 2 years 3 months
c) 1 year 6 months
d) 2 years e) 1 year

Q.65) Paul lent an amount of Rs.16500 to his friends namely karisma, sonam, Diandra in the ratio 5:3:7 with the rate of interest 6%, 4% and 3% respectively. Find the total interest received by Paul at the end of 2 years in Rs.

a) 1386 b) 1686 c) 2365
d) 2346 e) 2267

Q.66) Sukumar has Rs.3600, part of which he lent at 4 percent and rest at 6 percent. The whole annual interest was Rs.164.how much he lent at 4 percent

a) 2500 b) 2480 c) 2780
d) 2600 e) 2700

Q.67) Rs.2400 amounts to Rs 2760 in 4 years at a certain rate of simple interest. If the rate of interest is increased by 2%, it would amount to how much Rs?

a) 2682 b) 2582 c) 2782
d) 2952 e) 2652

Q.68) A certain sum of money amounted to Rs.1680 at 8% in a year and Rs.760 amounted to Rs.1140 at 3% in the same period. If the rate of interest is simple find the sum.

a) 780 b) 720 c) 740
d) 680 e) 760

Q.69) If Rs.7452 is divided in to three parts such that their amounts after 2, 3 and 4 years respectively are equal, the simple interest being at the rate of 5% per annum. Find the difference between the greatest and smallest parts of the sum

a) 204 b) 214 c) 211
d) 216 e) 264

Q.70) The amount of a certain sum with simple interest for 15 years is 439.80 and with simple interest for $7\frac{1}{2}$ years more is 523.047.Find the rate percent per annum at which interest is reckoned.

a) 7% b) 4% c) 5%
d) 9% e) 12%

Q.71) Mahesh borrows Rs.7500 from a bank at SI. After 5 years he paid Rs.3500 to the bank and at the end of 8 yrs from the date of borrowing he paid Rs.6500 to the bank to settle the account. Find the rate of interest.

a) 7.35% b) 5.05% c) 3.95%
d) 4.55% e) 3.85%

Q.72) Out of a certain sum, one fifth is invested at 4%,one sixth is invested at 8% and the rest at 2%.If the simple interest for 2 years from all these investments amounts to Rs.578.find the original sum.

a) 8500 b) 7500 c) 6000
d) 7000 e) 5400

Q.73) When a bank reduce the rate of interest from $4\frac{1}{2}$% per annum to $3\frac{1}{2}$% per annum, depositor withdrew Rs.840 and thereby his interest reduced by 65. Find the initial deposit?

a) 3160 b) 3560 c) 3870
d) 3960 e) 3540

Q.74) On Rs.3500 invested at simple interest at rate of 6% per annum, Rs.1050 is obtained as interest in certain years. In order to earn Rs.1800 as interest on Rs.4500 in same number of years what should be rate of simple interest

a) 6% b) 7% c) 8%
d) 5% e) 4%

Q.75) The simple interest on a certain sum of money for 2 yr at 8% per annum is 30 less than the simple interest on the same sum for 3 yr at 6% per annum. Find the sum in Rs.

a) 1360 b) 1560 c) 1750
d) 1600 e) 1500

Answer Key:

1. (c) 2. (d) 3. (a) 4. (b) 5. (c) 6. (c) 7. (a)
8. (d) 9. (e) 10. (e) 11. (c) 12. (b) 13. (b)
14. (d) 15. (a) 16. (b) 17. (d) 18. (b) 19. (a)
20. (b) 21. (e) 22. (a) 23. (c) 24. (d) 25. (b)
26. (e) 27. (e) 28. (a) 29. (a) 30. (b) 31. (e)
32. (a) 33. (c) 34. (c) 35. (b) 36. (d) 37. (c)
38. (a) 39. (c) 40. (b) 41. (d) 42. (e) 43. (b)
44. (e) 45. (e) 46. (b) 47. (b) 48. (d) 49. (d)
50. (c) 51. (c) 52. (a) 53. (b) 54. (d) 55. (d)
56. (d) 57. (c) 58. (c) 59. (d) 60. (c) 61. (b)
62. (a) 63. (b) 64. (b) 65. (a) 66. (d) 67. (d)
68. (b) 69. (d) 70. (b) 71. (b) 72. (a) 73. (b)
74. (c) 75. (e)

Q.1) c

$SI = 424 - 400 = Rs.24$

$R = \frac{24 \times 100}{400 \times 3} = 2\%$

$\text{New rate} = 2 + 8 = 10\%$

$SI = \frac{400 \times 10 \times 2}{100} = \text{Rs.}80$

$\text{Amount} = 400 + 80 = \text{Rs.}480$

Q.2) d

Explanation:

Total interest = Rs. 4425

Rate = 7% and increasing by 0.25% every year

Let total Loan Amount = P

$$P = \frac{4425 \times 100}{7 \times 1 + 7.25 \times 1 + 7.5 \times 1 + 7.75 \times 1}$$

$$= \frac{442500}{29.5} = Rs.15000$$

Q.3) a

Explanation:

Let total sum=Rs. 100

Interest on first part $= \frac{30 \times 30 \times 1}{100}$= Rs.9

Interest on second part $= \frac{35 \times 14 \times 1}{100}$ = Rs.4.9

Interest on third part $= \frac{35 \times 12 \times 1}{100}$ = Rs.4.2

Total interest = 9+4.9+4.2 = 18.1

Rate of interest = 18.1%

Q.4) b

Explanation:

Amount invested at 15% = Rs. x

Amount invested at 20% = Rs. y

$1900 = x \times 15 \times \frac{1}{100} + y \times 20 \times \frac{1}{100}$

15x + 20y = 190000

$2450 = x \times 20 \times \frac{1}{100} + y \times 15 \times \frac{1}{100}$

20x + 15y = 245000

Solving we get

y=7142.8

Q.5) c

Explanation:

Let first part = Rs. x

$\frac{x \times 3 \times 5}{100} = \frac{(8000 - x) \times 5 \times 9}{100}$

$\frac{3x}{20} = \frac{72000 - 9x}{20}$

x = Rs. 6000

Second part = 8000 – 6000 = Rs. 2000

Q.6) c

Explanation:

$= 14160 = P + \frac{P \times R \times 3}{100}$

$= \frac{3PR}{100} = 14160 - P$

$= 14700 = P + \frac{P \times 1.25R \times 3}{100}$

$= P + \frac{5}{4} \times \frac{3PR}{100} = 14700$

$= P + \frac{5}{4}(14160 - P) = 14700$

$= 4P + 70800 - 5P = 58800$

$= P = 12000$

$= 14160 = 12000 + \frac{12000 \times R \times 3}{100}$

$= 14160 = 12000 + (120 \times R \times 3)$

$= 14160 - 12000 = 360R$

$= 2160 = 360R$

$= R = \frac{2160}{360} = 6\%$

Q.7) a

Explanation:

Let the 2 different rates be x and y respectively.

Difference between the interests is Rs 300

$= \frac{5500 \times x \times 3}{100} - \frac{5500 \times y \times 3}{100} = 300$

=16500x-16500y=300×100

16500(x – y) = 30000

x-y=1.81%

Q.8) d

Explanation:

$P = \frac{SI \times 100}{R1T1 + R2T2 + R3T3}$

$P = \frac{21000 \times 100}{3 \times 4 + 4 \times 3 + 9 \times 2}$

$= \frac{2100000}{12 + 12 + 18}$

= Rs. 50000

Q.9) e

Explanation:

Difference in interests = Rs.1000

Difference in rate = 14– 10 = 4%

Time = 5 year

In 5 year, rate of interest = $4\% \times 5 = 20\%$

20% = 1000

$100\% = \frac{1000 \times 100}{20}$ = Rs. 5000

Total amount invested in both the schemes = 10000

Q.10) e

Explanation:

$SI = \frac{PNR}{100}$

$\frac{7000 \times R \times 3}{100} + \frac{4000 \times R \times 2}{100} = 3000$

210 R+80 R=3000

290 R=3000

R=10.34%

Q.11) c

Explanation:

$SI = \frac{PNR}{100}$

Since the second loan is given after 6 months n=$\frac{1}{2}$

$$\frac{840 \times R \times 1}{100} + \frac{420 \times 2R \times 1}{100 \times 2} = 80$$

8.4 R + 4.2 R=80

12.6 R=80

R=$\frac{80}{12.6}$

=6.34%

Q.12) b

Explanation:

Let x be the instalment

$$For\ 1st\ year = x + \frac{x \times 8 \times 1}{100}$$

$$For\ 2nd\ year = x + \frac{x \times 821}{100}$$

For 3rd year=x

$$\left[x + \frac{x \times 8 \times 1}{100}\right] + \left[x + \frac{x \times 8 \times 2}{100}\right] + x = 1053$$

$$3x + \frac{16x}{100} + \frac{8x}{100} = 1053$$

300x+24x=105300

324x=105300

x=325

Q.13) b

Explanation:

Principal = Rs.400

Amount = Rs 100 x 6 = Rs 600

Interest = Rs 600 - Rs 400 = Rs 200

Time = 6 months = $\frac{6}{12}$ years

$$200 = \frac{400 \times 1 \times r}{2 \times 100}$$

$$r = \frac{440 \times 100}{400}$$

=100%

Q.14) d

Explanation:

Amount of each instalment =$\frac{100\ p}{100n + \frac{n(n-1)r}{2}}$

$\frac{100 \times 406}{100 \times 2 + \frac{2(2-1)3}{2}}$

=$\frac{40600}{203} = 200$

=Rs.200

Q.15) a

$$Amount\ of\ each\ instalment = \frac{100\ p}{100n + \frac{n(n-1)r}{2}}$$

$$150 = \frac{100\ p}{100 \times 4 + \frac{4(4-1)2}{2}}$$

$$150 = \frac{100\ p}{400 + 12}$$

$$p = \frac{150}{100}(412) = 618$$

=Rs.618

Q.16) b

Explanation:

In the case of simple interest, instalment amount will always be reduced from principal and the interest will be calculated on the remaining principal.

Simple interest for 1st yr=$\frac{pnr}{100}=\frac{50000\times1\times5}{100}=2500$

Amount after 1st instalment=50000-5000=45000

Simple interest for 2nd yr=$\frac{pnr}{100}=\frac{45000\times1\times5}{100}=2250$

Amount after 2nd instalment=45000-10000=35000

Simple interest for 3rd yr=$\frac{pnr}{100}=\frac{35000\times1\times5}{100}=1750$

Amount after 3rd instalment=35000-15000=20000

Simple interest for 4th yr=$\frac{pnr}{100}=\frac{20000\times1\times5}{100}=1000$

Amount after 4th instalment=20000-20000=0

Balance of debt for the fifth year=2500+2250+1750+1000=7500

Q.17) d

Explanation:

Let sum be x

n=8 yrs

SI=900

R=$\frac{100\times SI}{P\times n}$

R=$\frac{100\times900}{x\times8}=\frac{11250}{x}$

For 1st 4 yrs

SI=$\left(x\times\frac{11250}{x}\times4\times\frac{1}{100}\right)=450$

For last 4 yrs

SI=$\left(3x\times\frac{11250}{x}\times4\times\frac{1}{100}\right)=1350$

Total interest=1350+450=1800

Q.18) b

Explanation:

S.I for 3 years = Rs.(1460-1100)=Rs.360

Sum = Rs.(1100-360) = Rs.740

Rate = $\frac{100\times240}{740\times2}=16.21\%\approx16\%$

Q.19) a

Explanation:

Let each sum be Rs. P. Then,

$\frac{p\times9\times13}{100\times2}-\frac{p\times9\times9}{100\times2}=288$

$\frac{117P}{200}-\frac{81P}{200}=\frac{36P}{200}=288$

$P=\frac{288\times200}{36}=1600$

Q.20) b

Explanation:

For first loan

$SI=\frac{PNR}{100}$

=$\frac{8000\times9\times1}{100\times2}=360$

For Second loan=$\frac{12000\times8\times1}{100}=960$

Total interest=3600

So for the third loan SI=3600-(960+360)=2280

Rate of interest for third loan=$\frac{2280\times100}{22000}=10.36\%$

Q.21) e

Explanation:

P=12000

R=8

n=6

$\frac{12000 \times 8 \times 6}{100} - \frac{12000 \times 4 \times R}{100} = 2500$

480R=5760-2500

480R=3260

R=6.79≈6.8%

Q.22) a

Explanation:

Difference in interests = 4500 – 3000 = Rs.1500

Difference in rate = 16– 12 = 4%

Time = 8 year

In 8 year, rate of interest = $4\% \times 8$ = 32%

=32% = 1500

=100%= $\frac{1500 \times 100}{32}$ = Rs. 4687.5

Total amount invested =2(4687.5) = 9375

Q.23) c

Explanation:

$SI = \frac{PNR}{100}$

$\frac{9000 \times R \times 4}{100} + \frac{6000 \times R \times 2}{100} = 2500$

360 R+120 R=2500

480 R=2500

R=5.20%

Q.24) d

Explanation:

$SI = \frac{PNR}{100}$

Since the second loan is given after 6 years

n=$\frac{1}{2}$

$\frac{960 \times R \times 1}{100} + \frac{480 \times 2R \times 1}{100 \times 3} = 120$

9.6 R + 3.2 R=120

12.8 R=120

R=$\frac{120}{12.8}$

=9.375%

Q.25) b

Explanation:

Let x be the instalment

For 1st year=$x + \frac{x \times 5 \times 2}{100}$

For 2nd year=$x + \frac{x \times 5 \times 1}{100}$

For 3rd year=x

$\left[x + \frac{x \times 5 \times 2}{100}\right] + \left[x + \frac{x \times 5 \times 1}{100}\right] + x = 1134$

3x+$\frac{10x}{100} + \frac{5x}{100} = 1134$

300x+15x=113400

315x=113400

x=360

Q.26) e

Explanation:

Principal = Rs.1200

Amount = Rs 180 x 8 = Rs 1440

Interest = Rs 1440 - Rs 1200 = Rs 240

Time = 8 months = $\frac{8}{12}$ years

$240 = \frac{1200 \times 2 \times r}{3 \times 100}$

$r = \frac{3 \times 100 \times 240}{1200 \times 2}$

=30%

Q.27) e

Explanation:

R1 =4x

R2=5x

$T1 = T2 = \frac{1}{2} yr$

$\frac{[P1 \times 4x \times (1)]}{100 \times 2} = \frac{[P2 \times 5x \times (1)]}{100 \times 2}$

P1:P2 = 5:4

Q.28) a

Explanation:

P = 4000

Rate of Interest = x

SI = $\frac{4000 \times x \times 1}{100} = 40x$

P = 6000

Rate of Interest = 2x

SI = $\frac{6000 \times 2x8}{100 \times 12}$ = 80x

$40x + 80x = 576$

x = 4.8%

Q.29) a

Explanation:

Principal for the next month = 540 - 240 = 300

Amount paid after next month = 324

Therefore interest charged at Rs.300

$= \frac{300 \times 1 \times R}{100} = 24$

R=8%

Q.30) b

Amount of each instalment = $\frac{100\ p}{100n + \frac{n(n-1)r}{2}}$

$220 = \frac{100\ p}{100 \times 6 + \frac{6(6-1)3}{2}}$

$220 = \frac{100\ p}{600 + 45}$

$p = \frac{220}{100}(645) = 1419$

$= Rs. 1419$

Q.31) e

Explanation:

In the case of simple interest, instalment amount will always be reduced from principal and the interest will be calculated on the remaining principal.

Simple interest for 1st yr=$\frac{pnr}{100} = \frac{60000 \times 1 \times 6}{100} =$ 3600

Amount after 1st instalment=60000-6000=54000

Simple interest for 2nd yr=$\frac{pnr}{100} = \frac{54000 \times 1 \times 6}{100} =$ 3240

Amount after 2nd instalment=54000-12000=42000

Simple interest for 3rd yr=$\frac{pnr}{100} = \frac{42000 \times 1 \times 6}{100} =$ 2520

Amount after 3rd instalment=42000-18000=24000

Simple interest for 4th yr=$\frac{pnr}{100}=\frac{24000\times1\times6}{100}=1440$

Amount after 4th instalment=24000-24000=0

Balance of debt for the fifth year=3600+3240+2520+1440=10800

Q.32) a

Explanation:

S.I for 2 years=140

$\text{S.I for 5 years}=\frac{140}{2}\times5=350$

Principal=1350-350 =1000

$\text{Amount after 3 years}=1000+\left(3\times\frac{140}{2}\right)$

$=Rs.1210$

Q.33) c

Explanation:

S.I for 3 years = Rs.(1860-1500)=Rs.360

S.I for 4 years = $Rs.\left(\frac{360}{3}\times4\right)$ = Rs.480

Sum = Rs. (1500-480) = Rs.1020

Rate = $\frac{100\times480}{1020\times4}=11.76\%$

Q.34) c

Explanation:

Let each sum be Rs. P. Then,

$\frac{p\times7\times9}{100\times2}-\frac{p\times7\times7}{100\times2}=84$

$\frac{63P}{200}-\frac{49P}{200}=\frac{14P}{200}=84$

$P=\frac{84\times200}{14}=1200$

Q.35) b

Explanation:

For first loan

$SI=\frac{PNR}{100}$

$=\frac{6000\times7\times1}{100\times2}=210$

For Second loan=$\frac{8000\times6\times1}{100}=480$

Total interest=3200

So for the third loan SI=3200-(480+210)=2510

Rate of interest for third loan=$\frac{2510\times100}{10000}=25.1\%$

Q.36) d

Explanation:

P=4500

R=3.5

n=5

$\frac{4500\times3.5\times5}{100}-\frac{4500\times5\times R}{100\times2}=281.25$

112.5R=787.5-281.25

112.5R=506.25

R=4.5%

Q.37) c

Explanation:

$\text{SI}=544-486=Rs.58$

$\text{R}=\frac{58\times100}{486\times6}=1.98\%$

$\text{New rate}=1.98+5=6.98\%\approx7$

$\text{SI}=\frac{486\times7\times3}{100}=102.06\approx102$

$\text{Amount}=486+102=\text{Rs.}588$

Q.38) a

Explanation:

Total interest = Rs. 6125

Rate = 6% and increasing by 0.5% every year

Let total Loan Amount = P

$$P = \frac{6125 \times 100}{6 \times 1 + 6.5 \times 1 + 7 \times 1 + 7.5 \times 1 + 8 \times 1}$$

$$= \frac{612500}{35} = Rs.17500$$

Q.39) c

Explanation:

Let total sum=Rs. 100

Interest on first part $= \frac{25 \times 14 \times 1}{100}$ = Rs.3.5

Interest on second part $= \frac{30 \times 18 \times 1}{100}$ =

Rs.5.4

Interest on third part $= \frac{45 \times 16 \times 1}{100}$ = Rs.7.2

Total interest = 3.5+5.4+7.2 = 16.1

Rate of interest = 16.1%

Q.40) b

Explanation:

Amount invested at 15% = Rs. x

Amount invested at 25% = Rs. y

$2300 = x \times 15 \times \frac{1}{100} + y \times 25 \times \frac{1}{100}$

15x + 25y = 230000

$2725 = x \times 25 \times \frac{1}{100} + y \times 15 \times \frac{1}{100}$

25x + 15y = 272500

Solving we get

y=Rs.4156.25

Q.41) d

Explanation:

Let first part = Rs. x

$$\frac{x \times 5 \times 3}{100 \times 2} = \frac{(8000 - x) \times 9 \times 1}{100 \times 2}$$

$$\frac{15x}{200} = \frac{72000 - 9x}{200}$$

24x = Rs. 72000

x=3000

Second part = 8000 – 3000 = Rs. 5000

Q.42) e

Explanation:

Let the 2 different rates be x and y respectively.

Difference between the interests is Rs 700

$$= \frac{8300 \times x \times 4}{100} - \frac{8300 \times y \times 4}{100} = 700$$

=33200x-33200y=700×100

33200(x – y) = 70000

x-y=2.10%

Q.43) b

Let Sum be x

In four years the sum will be $\frac{9}{5}x$

SI=$\frac{9}{5}x - x = \frac{4}{5}x$

SI=$\frac{PNR}{100}$

$R=\frac{100\times\frac{4}{5}x}{x\times4}=20\%$

R=20%

Q.44) e

Explanation:

Let x be the instalment

For 1st year=$x+\frac{x\times7\times3}{100}$

For 2nd year=$x+\frac{x\times7\times2}{100}$

For 3rd year=$x+\frac{x\times7\times1}{100}$

For 4th year=x

$$\left[x+\frac{x\times7\times3}{100}\right]+\left[x+\frac{x\times7\times2}{100}\right]+\left[x+\frac{x\times7\times1}{100}\right]+x=773.5$$

$4x+\frac{21x}{100}+\frac{14x}{100}+\frac{7x}{100}=773.5$

400x+42x=77350

442x=77350

x=175

Q.45) e

Explanation:

Total interest = Rs.3864

Rate = 5% and increasing by 0.75% every year

Let total Loan Amount = P

$$P=\frac{3864\times100}{5\times1+5.75\times1+6.5\times1}=\frac{386400}{17.25}=Rs.22400$$

Q.46) b

Explanation:

Let principal be p

SI is also P since the amount is doubled in 5 years

$R=\frac{SI\times100}{P\times5}=\frac{100p}{5p}=20\%$

R=20%

Q.47) b

Explanation:

$SI=\frac{PNR}{100}$

$R=\frac{SI\times100}{P\times N}$

$R=\frac{2000\times100}{7500\times6}$

R=4.44%

Q.48) d

Explanation:

Interest is Rs.3 per day

So for a year, interest =365×3=1095

Then $SI=\frac{PNR}{100}$

$P=\frac{SI\times100}{R\times N}$

$=\frac{1095\times100}{6\times1}$=18250

Sum=Rs.18250

Q.49) d

Explanation:

Interest for the first sum

$=\frac{8000\times12\times1}{100}$=960

Interest for the second sum

$=\frac{6500\times9\times1}{100}=585$

Total interest=960+585=1545

Total sum=8000+6500=14500

Required percentage=$\frac{1545\times100}{14500}=10.65\%$

Q.50) c

Explanation:

Let SI=Principal=x

Years =rate=y

R=$\frac{SI\times100}{P\times N}$

y= $\frac{x\times100}{x\times y}$

y=$\frac{100}{y}$

$y^2=100$

y=10%

Q.51) c

Explanation:

Let x be the instalment

For 1st year=$x+\frac{x\times9\times4}{100}$

For 2nd year=$x+\frac{x\times9\times3}{100}$

For 3rd year=$x+\frac{x\times9\times2}{100}$

For 4th year=$x+\frac{x\times9\times1}{100}$

For 5th year=x

$$\left[x+\frac{x\times9\times4}{100}\right]+\left[x+\frac{x\times9\times3}{100}\right]+\left[x+\frac{x\times9\times2}{100}\right]+\left[x+\frac{x\times9\times1}{100}\right]+x=1062$$

5x+$\frac{36x}{100}+\frac{27x}{100}+\frac{18x}{100}+\frac{9x}{100}=1062$

500x+90x=106200

590x=106200

x=$\frac{106200}{590}$

x=180

Q.52) a

Explanation:

$$p+\frac{p\times12\times t}{100}=550$$

$$p+\frac{p\times7\times t}{100}=530$$

Difference=$\frac{p\times5\times t}{100}=20$

pt=$\frac{25000}{5}=400$

$$p=550-\frac{400\times12}{100}=\frac{55000-4800}{100}=502$$

Therefore

$$502+\frac{502\times12\times t}{100}=550$$

t=$\frac{4800}{502\times12}=9.6=$

$10months$(Approximately)

Q.53) b

Explanation:

Interest from Giri=$\frac{4000\times5\times2}{100}=400$

Interest from Ganesh=$\frac{6000\times7\times2}{100}=840$

Interest from Yadav=$\frac{8000\times9\times2}{100}=1440$

Total interest=400+840+1440=2680

=Rs.2680

Q.54) d

Explanation:

Let amount lent at 3.5% be x

Amount lent at 4.5%=(2400-x)

$$\frac{x\times7}{2\times100}+\frac{(2400-x)\times9}{2\times100}=88$$

$$\frac{7x}{200}-\frac{9x}{200}=88-108$$

$-\frac{x}{100} = -20$

x=2000

Q.55) d

Explanation:

SI=$\frac{PNR}{100}$

SI=1764-1400=364

R=$\frac{364\times100}{5\times1400} = 5.2\%$

it increases by 3%

R becomes 5.2+3=8.2%

SI=$\frac{1400\times8.2\times5}{100} = 574$

Amount=1400+574=1974

Q.56) d

Explanation:

840 is amounted to 1120 at 5%

SI=1120-840=280

T=$\frac{280\times100}{840\times5} = \frac{20}{3}\ years$

Now P+$\frac{P\times7\times20}{3\times100} = 1440$

$p + \frac{7p}{15} = 1440$

$22p = 1440 \times 15$

p=Rs. 982(Approximately)

Q.57)c

Explanation:

Let the amount divided into three parts x y z

According to the question

$x + \frac{x \times 2 \times 2}{100} = y + \frac{y \times 3 \times 2}{100} = z + \frac{z \times 4 \times 2}{100}$

$x + \frac{4x}{100} = y + \frac{6y}{100} = z + \frac{8z}{100}$

x:y:z=52:53:54

x+y+z=8010

Required difference=2 parts.

=8010×$\frac{2}{159}$

=50.37×2=100.74≈101

Q.58) c

Explanation:

Amount after 10 years=$p + \frac{p\times r\times10}{100} = 293.20$

Amount after 15 years=$p + \frac{p\times r15}{100} = 348.175$

Difference=$\frac{5pr}{100} = 54.975$

$p + \frac{p \times r \times 10}{100} = 293.20$

p=293.20-54.975(2)

p=293.20-109.95

p=183.25

R=$\frac{5497.5}{183.25\times5}$ =6%

Q.59) d

Explanation:

Total interest= (interest on 3500 for 3 years)+(interest on 2000 for 2 years)

$\frac{3500\times3\times R}{100} + \frac{2000\times2\times R}{100}$=1500+2725-3500

105R+40R=725

R=5%

Q.60) c

Explanation:

Rest part = 1 - $\left(\frac{1}{4}+\frac{1}{3}\right)=\frac{5}{12}$

Average rate per cent per annum on the total sum

$=\left[\left(\frac{1}{4}\right)\times 5\right]+\left[\left(\frac{1}{3}\right)\times 7\right]+\left[\left(\frac{5}{12}\right)\times 9\right]=\frac{22}{3}\%$

$P=\frac{100\times SI}{R\times T}=\frac{100\times 880\times 3}{22\times 2}=6000$

Q.61) b

Explanation:

$Initially,$

$let\ P=A,$

$R=\frac{11}{2}\%\ per\ annum\ and\ T=1yr$

$SI=\frac{PRT}{100}=\frac{A\times 1\times\frac{11}{2}}{100}=\frac{11A}{200}$

$Now, new\ deposit=(A-750), R$

$=\frac{9}{2}\%\ per\ annum\ and\ T=1yr$

$SI=\frac{PTR}{100}=\frac{\left[(A-750)\times 1\times\frac{9}{2}\right)}{100}=\frac{9(A-750)}{200}$

By the given condition,

$\frac{11A}{200}-\frac{9(A-750)}{200}=85$

$11A-9(A-750)=200\times 85$

$2A=200\times 85-750\times 9$

$2A=17000-6750$

$2A=10250$

$A=5125$

62) a

Explanation:

N=$\frac{SI\times 100}{PR}$

=$\frac{1200\times 100}{4000\times 5}=6$

=$\frac{2000\times 100}{5000\times 6}=6.66\approx 6.67\%$

Q.63) b

Explanation:

Let x be the instalment

For 1st year=$x+\frac{x\times 4\times 4}{100}$

For 2nd year=$x+\frac{x\times 4\times 3}{100}$

For 3rd year=$x+\frac{x\times 4\times 2}{100}$

For 4th year=$x+\frac{x\times 4\times 1}{100}$

For 5th year=x

$\left[x+\frac{x\times 4\times 4}{100}\right]+\left[x+\frac{x\times 4\times 3}{100}\right]+\left[x+\frac{x\times 4\times 2}{100}\right]+\left[x+\frac{x\times 4\times 1}{100}\right]+x=1431$

5x+$\frac{16x}{100}+\frac{12x}{100}+\frac{8x}{100}+\frac{4x}{100}=1431$

500x+40x=143100

540x=143100

x=$\frac{143100}{540}$

x=265

Q.64) b

Explanation:

$p+\frac{p\times 8\times t}{100}=750$

$p+\frac{p\times 5\times t}{100}=715$

Difference=$\frac{p\times 3\times t}{100}=35$

pt=$\frac{3500}{3}$

$p + \frac{p \times 8 \times t}{100} = 750$

p=$750 - \frac{3500 \times 8}{3 \times 100} = 657$

Therefore

$657 + \frac{657 \times 8 \times t}{100} = 750$

T = $\frac{9300}{657 \times 8} = 1.76 =$

$1 years\ 9\ month$(Approximately)

Q.65) a

Explanation:

Interest from karisma=$\frac{5500 \times 6 \times 2}{100} = 660$

Interest from Sonam=$\frac{3300 \times 4 \times 2}{100} = 264$

Interest from Diandra=$\frac{7700 \times 3 \times 2}{100} = 462$

Total interest=660+264+462=1386

=Rs.1386

Q.66) d

Explanation:

Let amount lent at 4% be x

Amount lent at 6%=(3600-x)

$\frac{x \times 4}{100} + \frac{(3600 - x) \times 6}{100} = 164$

$\frac{4x}{100} - \frac{6x}{100} = 164 - 216$

$-\frac{2x}{100} = -52$

x=2600

Q.67) d

Explanation:

SI=$\frac{PNR}{100}$

SI=2760-2400=360

R=$\frac{360 \times 100}{4 \times 2400} = 3.75\%$

it increases by 2%

R becomes 3.75+2=5.75%

SI=$\frac{2400 \times 5.75 \times 4}{100} = 552$

Amount=2400+552=2952

Q.68) b

Explanation:

760 is amounted to 1140 at 3%

SI=1140-760=380

T=$\frac{380 \times 100}{760 \times 3} = \frac{50}{3}\ years$

Now P+$\frac{P \times 8 \times 50}{3 \times 100} = 1680$

$p + \frac{8p}{6} = 1680$

$14p = 1680 \times 6$

P=Rs.720

Q.69) d

Explanation:

Let the amount divided into three parts x y z

According to the question

$x + \frac{x \times 2 \times 5}{100} = y + \frac{y \times 3 \times 5}{100} = z + \frac{z \times 4 \times 5}{100}$

$x + \frac{10x}{100} = y + \frac{15y}{100} = z + \frac{20z}{100}$

104x=106y=108z

=7452×$\frac{2}{69}$

=108×2=216

Q.70) b

Explanation:

Amount after 15 years=$p+\frac{p\times r\times 15}{100}=$ 439.80

Amount after $22\frac{1}{2}$ years=$p+\frac{p\times r\times 45}{100\times 2}=$ 523.047

Difference=$\frac{7.5pr}{100}=83.247$

P=439.80-83.247(2)

P=439.80-166.494

P=273.306

$R=\frac{8324.7}{7.5\times 273.306}=4.06\text{`}\%\sim 4\%$

Q.71) b

Explanation:

Total interest=(interest on 7500 for 5 years)+(interest on 4000 for 3 years)

$\frac{7500\times 5\times R}{100}+\frac{4000\times 3\times R}{100}$=3500+6500-7500

=375R+120R=2500

R=5.05%

Q.72) a

Explanation:

Rest part = 1 - $\left(\frac{1}{5}+\frac{1}{6}\right)=\frac{19}{30}$

Average rate per cent per annum on the total sum

$=\left[\left(\frac{1}{5}\right)\times 4\right]+\left[\left(\frac{1}{6}\right)\times 8\right]+\left[\left(\frac{19}{30}\right)\times 2\right]=\frac{17}{5}\%$

$P=\frac{100\times SI}{R\times T}=\frac{100\times 578\times 5}{17\times 2}=8500$

Q.73) b

Explanation:

$Initially,$

$let\ P=A,$

$R=\frac{9}{2}\%\ per\ annum\ and\ T=1yr$

$SI=\frac{PRT}{100}=\frac{A\times 1\times\frac{9}{2}}{100}=\frac{9A}{200}$

$Now, new\ deposit=(A-840), R$

$=\frac{7}{2}\%\ per\ annum\ and\ T=1yr$

$SI=\frac{PTR}{100}=\frac{\left[(A-840)\times 1\times\frac{7}{2}\right)}{100}=\frac{7(A-840)}{200}$

By the given condition,

$\frac{9A}{200}-\frac{7(A-840)}{200}=65$

$9A-7(A-840)=200\times 65$

$2A=200\times 65-840\times 7$

$2A=13000-5880$

$2A=7120$

$A=3560$

74) c

Explanation:

N=$\frac{SI\times 100}{PR}$

=$\frac{1050\times 100}{3500\times 6}=5$

$=\frac{1800\times100}{4500\times5}=8\%$

75) e

Explanation:

T1 = 2, R1= 8% T2=3 yr and R2 = 6%

Let the sum be P.

Then, $\left[\frac{P\times6\times3}{100}\right]-\left[\frac{P\times8\times2}{100}\right]=30$

$=\left(\frac{18P}{100}\right)-\left(\frac{16P}{100}\right)=30$

P = 1500

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