

Mindworkzz
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Must Know Series- Percentages, Profit & Loss

Q1. Anil bought a second hand bike for some price from Ankit. Anil spent 5000 on repairs and then sold the bike at 25 percent profit to Sushil. Sushil found that the tyres of the bike were very old so he spent 5000 in replacing the tyres. He then sold the bike at a price which was 20,000 more than the price at which Ankit sold the bike to Anil. If Sushil earned a profit of 16.67 percent then find the price at which Anil sold the bike.

Answer:25000

Q2. Anil buys 12 toys and labels each with the same selling price. He sells 8 toys initially at 20% discount on the labeled price. Then he sells the remaining 4 toys at an additional 25% discount on the discounted price. Thus, he gets a total of Rs 2112, and makes a 10% profit. With no discounts, his percentage of profit would have been

- A. 50
- B. 60
- C. 54
- D. 55

Answer: A

Q3. A milkman has 100L of milk with him. He bought this 100L for 10000 Rs. He sells 20L of it at 80Rs per liter and replaces the sold milk by water. He then again sells 20L of the mixture at 85 Rs per liter and replaces it with water. He then sells 25L of the mixture at 90 Rs per liter and replaces it water. He then finally sells 25L at 95 Rs per liter. What is his overall profit/loss in these transactions, assume water comes free of cost? (if you feel he had a loss of X Rs then put -X as the answer and if you feel he had an overall profit of X Rs then put X as the answer)

Answer:1525

Q4. A certain amount is given at compound interest and the amount increased by 27% between the 2nd year and 4th year. After how many years does the amount double itself?

- A. 8 years
- B. 7 years
- C. 6 years
- D. Can't be determined

Answer: C

Q5. Veeru invested Rs 10000 at 5% simple annual interest, and exactly after two years, Joy invested Rs 8000 at 10% simple annual interest. How many years after Veeru's investment, will their balances, i.e., principal plus accumulated interest, be equal?

Answer:12

Q6. A loan amount of Rs. 7200 was repaid in two equal half yearly installments. If the rate of compound interest is 50% p.a compounded semi annually, what is the amount paid in each installment?

Answer:5000

Q7. Raghav earns salary $10000x$, where x is an integer. His salary is increased by $x\%$, then the salary becomes $10000p$, where p is a perfect square. Then the salary of Raghav after the increase is

- A. Rs. 2250000
- B. Rs. 1960000
- C. Rs. 1440000
- D. Rs. 2560000

Answer: C

Q8. Ritika invests one-fifth of his capital at 6%, one-third at 10% and the remaining at 1%, each rate being simple interest per annum. Then, the minimum number of years required for the cumulative interest income from these investments to equal or exceed his initial capital is

Answer: 20

Q9. Ashuman had an initial capital of Rs.20,000. Out of this, he invests Rs.8,000 at 5.5% in bank A, ₹5,000 at 5.6% in bank B and the remaining amount at $x\%$ in bank C, each rate being simple interest per annum. His combined annual interest income from these investments is equal to 5% of the initial capital. If he had invested his entire initial capital in bank C alone, then his annual interest income, in rupees, would have been

- A. 900
- B. 700
- C. 1000
- D. 800

Answer: D

Q10. Kavita borrows Rs. X from Fatima at 8% annual interest. She then adds Rs. Y of her own money and lends Rs. $X+Y$ to Shaurya at 10% annual interest. At the end of the year, after returning Fatima's dues, the net interest retained by Kavita is the same as that accrued to Fatima. On the other hand, had Kavita lent Rs. $X+2Y$ to Shaurya at 10%, then the net interest retained by her would have increased by Rs. 150. If all interests are compounded annually, then find the value of $X + Y$. _____

Answer: 4000

Q11. Suresh deposited a sum ₹A ($A > 1000$) in a bank, which offers a simple interest of 12.5% p.a on deposits, for a period of two years. At the end of two years, he withdrew the total amount and lent it to Srinivas at $x\%$ p.a., compounded annually. If the interest due for the first year on Srinivas' loan was ₹2000 and Srinivas owes a total of ₹14400 to Suresh at the end of the second year, what is the value of A?

- A. 8000
- B. 10000
- C. 5000
- D. 12500

Answer: A

Q12. If the difference between the total compound interest and the total simple interest accrued on a certain sum at a certain rate of interest at the end of two years is 6.25% of the principal, find the number of years in which the sum will quadruple under simple interest.

- A. 12
- B. 16
- C. 20
- D. 24

Answer: A

Q13. If the compound interest accrued on a certain sum, at 11% p.a, for two years is ₹1064.8 more than the simple interest accrued on the same sum, at the same rate and for the same period, what is the sum?

- A. ₹9,680
- B. ₹8,800
- C. ₹80,000
- D. ₹88,000

Answer: D

Q14. At the beginning of the year 2000, a shepherd had 8 dozen sheep with him. During that year, he bought $x\%$ of the sheep he had at the beginning of the year. He sold $y\%$ of his sheep at the end of that year. The next year, he repeated the same process. At the beginning of the year 2002, the shepherd had more sheep with him than at the beginning of 2000. Which of the following holds true?

- A. $x < y$
- B. $x = y$
- C. $y < x < \frac{100y}{100-y}$
- D. $x > \frac{100y}{100-y}$

Answer: D

Q15. In an examination, The total score is N while the pass mark is 45% of N . Sachin obtains 36 marks, but falls short of the pass mark by 68%. Which of the following statements may be true?

- A. $N \leq 200$
- B. $243 \leq N \leq 252$
- C. $N \geq 253$
- D. $201 \leq N \leq 242$

Answer: B

Q16. A bag consists of a total of 120 coins in denominations of Rs.1, Rs.2 and Rs.5. The value of Rs.2 coins is at most 40% of the total value of the coins. The value of Rs.5 coins in the bag is at most 25% of the total value of the coins in the bag. If there are at most 70 Rs.1 coins in the bag, how many Rs.2 coins are there in the bag?

- A. 38
- B. 42
- C. 40
- D. Cannot be determined

Answer: C

Q17. Ritika scored 40% in an examination and after review, even though her score is increased by 50%, she fails by 35 marks. If her post-review score is increased by 20%, she will have 7 marks more than the passing score. The percentage score needed for passing the examination is

- A. 75
- B. 80
- C. 60
- D. 70

Answer: D

Q18. The income of Amala is 20% more than that of Bimala and 20% less than that of Kamala. If Kamala's income goes down by 4% and Bimala's goes up by 10%, then the percentage by which Kamala's income would exceed Bimala's is nearest to

- A. 28
- B. 29
- C. 31
- D. 32

Answer: C