



(Ref: FM-QAH2022001)

Basics of Percentage Comparison

TYPE – I

- 1. a) 62.5% of 1440 =
 - b) 44.44% of 3600 =
 - c) if 60% of x is equal to 75% of 1800, x =
 - d) 13.6% of 1750 =
- a) Aman earns more than Bimal. Aman spends 30% of his income on food and Bimal spends 25% of his income on food. Who spends more on food?
 b) In the above question if the income of Aman is less than that of Bimal, who spends more on food?
- 3. In an exam, the marks scored by A is 80 and the marks scored by B is 64.
 - a) A's score is what percentage more than B's?
 - b) B's score is what percentage less than A's?
 - c) A's score is what percentage of B's?
 - d) B's score is what percentage of A's?
- a) If the salary of A is 25% greater than that of B, by what percentage is B's salary less than that of A?b) If A's salary is 33.33% less than B's salary, by what percentage is B's salary greater than that of A?
- 5. One-third of two-fifth of three-sevenths of a number is 15. What is 40% of that number?
 a) 501
 b) 105
 c) 523
 d) 150
- 6. If x% of y is equal to z then what percentage of z is x?
 a) y²/100 b) x²/100 c) 100²/y d) 100²/x
- 7. If 85% of x = 34% of y, then find the value of x if y = 2000.
 a) 200 b) 300 c) 800 d) 500
- 8. 50% of a% of b is 3/4 of b% of c. Which of the following is c?
 a) 1.5a b) 0.667a c) 0.5a d) 1.25a
- 9. Rohit scored 110 runs which included 6 boundaries and 6 sixes. What percent of his total score did he make by running between the wickets?
 a) 45%
 b) 45(5/11)%
 c) 54(6/11)
 d) 55%
- 10. 500 sweets were distributed equally among children in such a way that the number of sweets received by each child is 20% of the total number of children. How many sweets did each child receive?
 a) 15 b) 10 c) 50 d) 45
- 11. If 75/2percent of the number is added with itself then the result becomes 594. Find 75% of the original number.
- 12. If 75 percent of a number is subtracted from itself then the result becomes 250. Find the 175% of the original number.

- 13. When 60% of a number A is added to another number B, B becomes 175% of its previous value. Then which of the following is true regarding the values of A and B?
 - a) A > B b) B > A c) $B \ge A$

d) Either a) or b) can be true depending upon the values of A and B $\,$

14. A student took five papers in an examination, where the full marks were the same for each paper. His marks in these papers were in the proportion of 6: 7:
8: 9: 10. In all papers together, the candidate obtained 60% of the total marks. Then the number of papers in which he got more than 50% marks is.
a) 2 b) 3 c) 4 d) 5

Percentage Change

- 15. In an examination, full mark is 600, Arun gets 25% more than Varun, Varun gets 40% more than Chandan, and Chandan gets 66(2/3)% more than Dinesh. If Arun got 270 Marks, what percentage of full marks did Dinesh got (approx)? (TITA)
- 16. Amit sells his goods 25% cheaper than Sumit and 25% dearer than Mukul. How much percentage is Mukul's goods cheaper than Sumit's?
 a) 33.33% b) 50% c) 66.66% d) 40%
- 17. On a shelf, the first row contains 25% more books than the second row and the third row contains 25% less books than the second row. If the total number of books contained in all the rows is 1200, then find the number of books in the first row.
 a) 500 b) 450 c) 600 d) None
- 18. A is 50% more than B, C is 2/3 of A and D is 60% more than C. Now, each of A, B, C, and D is increased by 10%. Find what percent of B is D (after the increase)?
 a) 176% b) 175% c) 160% d) 150%
- 19. The monthly salary of Amit is 33.33% more than Bijli's monthly salary and Bijli's monthly salary is 16.67% less than Chandu's. If the difference between the monthly salaries of Amit and Chandu is Rs2700, then find the annual salary of Bijli. (TITA)
- 20. A, B, C, and D purchased a restaurant for `56 lakhs. The contribution of B, C, and D together is 460% that of A, alone. The contribution of A, C, and D together is 366.66% that of B's contribution and the contribution of C is 40% that of A, B, and D together. The amount contributed by D is:
 a) 10 lakhs

a) tu lakns	D) 12 lakhs
c) 16 lakhs	d) 18 lakhs

21. A earns 25% more than B. C earns 25% more than A. A earns 20% more than D. E earns 20% more than A. A, B, C, D, and E earn integer amounts less than Rs. 100. What is the total amount earned by all five of them put together?

Fundan	Nakers
c) 17%	d) 18%

a) Rs. 480	c) Rs. 305
c) Rs. 300	d) Rs. 245

- 22. a) If the production of Rice tripled from 2020 to 2021. Find the percentage increase in the production of rice from 2020 to 2021?b) If the production of Rice in 2021 is 0.6 times that in 2020, by what percentage is the production in 2021 less than that in 2020?
- 23. The percentage increase in the sales of a company over the previous year during the period 2017 to 2020 is shown in the table.

Year	2017		2018	2019	20	20
%increase	20%		30%	16%	24	%
What is the	overall	ре	rcentage	increase	in	sales
from 2016 to	2020?					

24. a) If the price of an item is increased by 33.33% by what percentage should it be reduced to bring it back to the original level?b) If the price of an item is decreased by 22.22% by

b) If the price of an item is decreased by 33.33%, by what percentage should it be raised to bring it back to the original level?

25. a) The price of sugar increased by 40%. By what percentage should the consumption of sugar by a family be reduced so that their expenditure on sugar remains the same?

b) If the price of tea decreased by 20%, by what percentage should the consumption of tea by a family increase so that the total expenditure increases by 10%?

26. a) When the price of an article is increased by 20%, its sales decreased 30%. What is the effect on the sales revenue?

b) The price of an article increased by 25% and its sales decreased by 25%. What is the effect on the sales revenue?

- 27. The price of sugar is reduced by 25% but in spite of the decrease, Aayush ends up increasing his expenditure on sugar by20%. What is the percentage change in his monthly consumption of sugar?
 a) +60% b) -10% c) +33.33% d) 50%
- 28. Due to a 25% hike in the price of rice per kilogram, a person is able to purchase 20 kg less for Rs 400. Find the increased price of rice per kilogram.
 a) 5 b) 6 c) 10 d) 4
- 29. If the length of a rectangle is increased by 30% and breadth is increased by 20%. Find the percentage change in the perimeter of the rectangle?
- 30. If the length of a rectangle is increased by 30% and breadth is decreased by 10% then the overall perimeter of the rectangle increases by 15%. Find the ratio of length and breadth of the rectangle?
- 31. If the length of a rectangle is increased by 20% and breadth is increased by 10%. Which of the following cannot be the change in the perimeter of the rectangle?

a) 12% b) 16%

- 32. The length, breadth, and height of a room in the shape of a cuboid are increased by 50%, 20%, and 10% respectively. Find the percentage change in the volume of the cuboid.
 a) 77% b) 75% c) 88% d) 98%
- 33. The height of a triangle is increased by 40%. What can be the maximum percentage increase in length of the base so that the increase in area is restricted to a maximum of 75%?
 a) 50% b) 20% c) 14.28% d) 25%
- 34. The length of a rectangle is increased by 10%. The breadth of the rectangle is increased by 20%. The perimeter of the rectangle increased by x%. The range of x is_____.
 a) [15, 20)
 b) (10, 15]
 - c) (10, 20) d) None of these
- 35. The population of a city is increased 11%, 5%, and 7% in the last three years, What will be the present population if the population of a town was 2,40,000 three years ago?
 a) 2,99,600
 b) 2,99,500
 c) 2,99,400
 d) 2,99,300
- 36. The population of the village is 10,000 at this moment. It increases by 20% in the first year. However, in the second year, due to immigration, the population drops by 5%. Find the population at the end of the third year if in the third year the population increases by 10%.
 - a) 12,340 b) 12,540
 - c) 1,27,540 d) 12,340
- 37. The rate of inflation was 1000%. Then, what will be the cost of an article, which costs 6 units of currency now, two years from now?a) 666 b) 660 c) 720 d) 726
- 38. The population of a town is 15000. It increases by 20% in the first year and 10% in the second year. But in the third year, it decreases by 10 percent. What will be the population after 3 years?
 - a) 16820 b) 15820 c) 17820 d) 19820
- 39. A machine depreciates in value each year at the rate of 10% of its previous value. However, every second year there is some maintenance work so that in that particular year, depreciation is only 5% of its previous value. If at the end of the fourth year, the value of the machine stands at Rs. 1,46,205, then find the value of the machine at the start of the first year.

a) 2,10,000	b) 1,95,000
c) 2,00,000	d) 1,90,000

The population of a village is 5500. If the number of males increases by 11% and the number of females increases by 20%, then the population becomes 6330. Find the population of females in the town.

a) 3000	b) 2500
c) 3500	d) 2000



- 41. A purchased a flat at Rs 1 lakh and B purchase a plot of land worth Rs 1.1 lakh. The respective annual rates at which the prices of the flat and the plot increased were 10 % and 5%. After two years they exchanged their belongings and one paid the other the difference. Then
 - a) A paid Rs 275 to B
 - b) A paid Rs 475 to B
 - c) A paid Rs 2750 to B
 - d) B paid Rs 475 to A

TYPE – II

- 42. At an election, the candidate who got 56% of the votes cast won by 144 votes. Find the total number of voters on the voting list if 80% people cast their vote and there were no invalid votes.
 - a) 360 b) 720 c) 1800 d) 1500
- 43. In an election between 2 candidates, Bhiku gets 65% of the total valid votes. If the total votes were 6000, what is the number of valid votes that the other candidate Mhatre gets if 25% of the total votes were declared invalid?
 a) 1625 b) 1575 c) 1675 d) 1525
- 44. 10% of the voters did not cast their votes in an election between two candidates 10% of the votes polled were found invalid. The successful candidate got 54% of the valid votes and won by a margin of 1620 votes. The number of voters enrolled in the voter's list was.
 a) 25000
 b) 33000
 - c) 35000 d) 40000
- 45. In an election the votes between the winner and loser candidate are in the ratio 5:1. If total number of eligible voters are 2000, out of which 12% did not cast their vote and among the remaining vote 10% declared invalid. What is the number of votes the winner candidate get?
 a) 1240 b) 1260 c) 1280 d) 1320
- 46. In an election only two candidates contested 20% of the voters did not vote and 120 votes were declared as invalid. The winner got 200 votes more than his opponent thus he secured 41% votes of the total voters on the voter list. Find the percentage votes of the defeated candidate out of the total votes cast in the election?
- 47. In an election, 10% of the voters on the voters' list did not cast votes and 60 voters cast their ballot papers blank. There were only two candidates. The winner was supported by 47% of all voters in the list and he got 308 votes more than his rival. The number of voters on the list was:

 a) 4575
 b) 6028
 c) 3600
 d) 6200
- 48. 2/5 of the voters promise to vote for P and the rest promised to vote for Q. Of these, on the last day 15% of the voters went back of their promise to vote for P and 25% of voters went back of their promise to vote for Q, and P lost by 2 votes. Then the total number of voters is

a) 100	b) 110	c) 90	d) 95
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49. The number of votes not cast for the Praja Party increased by 25% in the National General Elections over those not cast for it in the previous Assembly Polls, and the Praja Party lost by a majority twice as large as that by which it had won the Assembly Polls. If a total of 2,60,000 people voted each time, how many voted for the Praja Party in the Assembly Elections? (1994)

a) 1,10,000	b) 1,50,000
c) 1,40,000	d) 1,20,000

- 50. According to a recent survey report issued by the Commerce Ministry, Government of India, 30% of the total FDI goes to Bihar and 20% of this goes to rural areas. If the FDI in Bihar, which goes to urban areas, is \$72 m, then find the size of FDI in rural MP, which attracts 50% of the FDI that comes to MP, which accounts for 20% of the total FDI?
 a) \$30 m
 b) \$9 m
 c) \$60m
 d) \$40 m
- 51. Mr. James wanted to distribute his wealth. He gave 20% of his wealth to his wife. 33.33% of the remaining to his son. 14.28% of the remaining to his daughter. 20% of the remaining to charity and saved the rest. If his savings and the amount he gave to his wife is Rs 990. Find the amount he donated in charity?
- 52. Mr. Ambani wanted to distribute his wealth. He gave 14.28% of his wealth to his wife. 20% of the remaining to his mother. 11.11% of the remaining equally amongst his two sons. 40% of the remaining equally amongst his three daughters and rest amount he donates in charity. If his wife and one daughter together received Rs 3530. Find the amount which one son received?
- 53. King Amrendra Bahubali, at his eleventh hour, called his three ministers and distributed his gold in the following way: He gave 50% of his wealth to his first minister, 50% of the rest to his second minister and again 50% of the rest to his third minister. If their combined share is worth 1,30,900 kilograms of gold, find the quantity of gold King Bahubali was having initially?

a) 1,50,000 kg	b) 1,49,600 kg
c) 1,51,600 kg	d) 1,52,600 kg

TYPE – III

- 54. Fresh fruits contain70% of water and dry fruits contain 20% of water. How much dry fruit can be obtained from 100kg of fresh fruits?
 a) 35 b) 37 c) 37.5 d) 40
- 55. In a mixture of 80 litres of milk and water, 25% of the mixture is milk. How much water should be added to the mixture so that milk becomes 20% of the mixture?a) 20 litresc) 25 litres
 - b) 15 litres d) 24 litres
- 56. 25 litre of solution contains alcohol and water in the ratio 2:3. How much alcohol must be added to the solution to make a solution containing 60% of alcohol?



a) 10.5 ltr	b) 11.5 ltr
c) 12.5ltr	d) 13.5 ltr

57. There are three water-alcohol solutions A, B and C whose alcohol concentrations are 50%, 60% and 70% respectively. x ml of A, (x + 2) ml of B and(x + 3) ml of C are mixed. If the alcohol concentration of the

PROFIT & LOSS

TYPE – I

59. What should come in the place of the following blanks?

	C. P	S.P	Profit/loss	Profit%
a.	3600			20%
b.		3000		25%
c.			4600	20%

- 60. a) The cost price of two articles is the same. If one item is sold at 15% profit and the other at 15% loss, what is the profit or loss percent on the whole?
 - b) Two articles were sold at the same price. On one article a loss of 20% was incurred and on the other, a profit of 20% was made. What is the profit or loss percent made on the whole?
- 61. Two articles were bought at the same price. One was sold at 30% profit and the other was sold at 30% loss. What is the profit or loss percent made on the whole?

62. A merchant sold a cycle at a loss of 20%. Instead, if he had sold it for Rs. 450 more, he would have made 10% profit. What is his cost price?

- 63. An article costing Rs. 300 when sold at a certain price results in a gain of x%. Had the cost price been Rs. 30 less and the selling price been Rs. 10 more, it should have resulted in a gain of 2x%. Find x.
- 64. The profit earned when the selling price is Rs. 370 is 20% more than the loss incurred when the selling price is Rs. 304. Find the cost price.
- 65. The selling price of the two articles is the same. One at a profit of 10% and the other at a loss of 20%. The overall loss is Rs. 280. Find total CP?
- 66. Selling Price of three articles is same. First article sold at 20% profit, second article at 20% loss and third article at 25% loss. Find overall profit or loss%?
- 67. Arun sells an article at 5% above its cost price. If he had bought it at 5% less than what he paid for it and sold it for2 less, he would have gained 10%. Find the cost price of the article.
 a) 360 b) 500 c) 400 d) 425
 - a) 300 b) 500 c) 400 d) 425
- 68. A manufacturer sells an article to a dealer at 12.5% profit. The dealer sells the article to customer at

resultant mixture is65%, then x lies in the range (2009)

- a) 0.1 to 0.5b) 0.5 to 0.9c) 0.9 to 1.4d) 1.4 to 1.9
- 58. A student instead of increasing a number by 12.5%, decreased the number by 12.5%. His answer differs from the correct answer by what %?

16.66% profit. If the customer pays Rs. 210 for the article, what did the article cost the manufacturer?

- 69. A sold an article to B at a profit of 25% and B sold it to A at a loss of 30%, find overall profit% or loss% of A?
- 70. A sold an article to B at a profit of 20% and B sold it to C at a loss of 25% and finally, C sold it back to A at 50% profit. Find overall profit% or loss% of A?
- 71. A sold an article to B at a profit of 10% and B sold it to C at a profit of 20%, C sold it to D at a profit of 25% to D and D finally sold it back to A at 20% profit. Find overall profit% or loss% of A?

TYPE – II

- 72. Prem purchased a certain number of articles at the rate of 15 for 18000 and sold all of them at the rate of 20 for 30000. Find the profit percentage of Prem in the transaction.
- 73. Amir incurred a loss of 22% by selling 80 oranges for 22,340. How many oranges must he sell for 22340 to make a 30% gain?
- 74. By selling candies at the rate of 56 for a rupee, a vendor loses 30%. How many candies must he sell for a rupee to gain 40%?
- 75. A fruit vendor purchased mangoes at the same price from two shops at rate of 2 per Rs 3 and 3 at Rs. 4. He sold all of them at the rate of 1 for Rs 1. Find overall profit or loss %?
- 76. A fruit vendor oranges at the same price from three shops at rate of 2 per Rs 3, 3 at Rs. 4 and 4 per Rs 3. He sold all of the oranges at the rate of 3 for Rs 2. Find overall profit or loss %?
- 77. Aman purchased equal quantity of goods from two shops at rate of 3kg per Rs 1 and 2kg at Rs. 3. He sold all of them. How many kgs he must sell at Rs. 121 to gain 10% in the transaction?
- 78. a) If the selling price of 24 oranges sold by a trader is equal to the cost price of 30 oranges, then find his profit or loss percent.b) If the profit on selling 40 chairs is equal to the cost price of 8 chairs, find the profit percent.c) If the profit made by a trader on selling 60 m of cloth is equal to the selling price of 15 m of cloth, find his

profit percent.



TYPE – III

- 79. A dishonest dealer professes to sell his goods at the cost price but uses a false weight of 900 gm instead of 1 kg. Find his profit percent?
- 80. A shopkeeper marks price of his goods by 20% his goods and uses a false weight of 800 gm instead of a kg. Find his profit percent?
- 81. A shopkeeper marks price of his goods by 25% and then offers a discount of 10% and he also uses a false weight of 800 gm instead of a kg. Find his profit percent?
- 82. A shopkeeper professes to sell his goods at cost price but while buying he takes 20% more than the indicated weight from the supplier and while selling he gives 20% less than the indicated weight to the customer. Find his profit percent?
- 83. A shopkeeper marks the price of his goods by 20% and then offers a discount of 10%. Besides he also cheats both his supplier and customer by 100 gms instead of a kg. Find his profit percent?
- 84. There is a dishonest shopkeeper whose claim is that he sells a certain product at a cost of Rs 23/kg, which actually costs him Rs 25/kg. The shopkeeper says that he is taking the loss to let his customers get a better deal. When examined thoroughly, a policeman finds that the shopkeeper is actually using an 800 gms weight in place of a 1 kg weight. Find his profit/loss%?
- 85. A shopkeeper cheats 20% on weight during purchase and uses a faulty weight instead of 1000 gms and finally earns a profit of 40%. Find the faulty weight?
- 86. A shopkeeper marks the price of his goods by x% and then offers a discount of 37.5% and he also cheats by 20 percent while purchasing. Find the value of x his profit is 50%?
- 87. A dishonest dealer marks up the price of his goods by 20% and gives a discount of 10% to the customer. Besides, he also cheats both his supplier and his buyer by 100 grams while buying or selling 1 kilogram. Find the percentage profit earned by the shopkeeper.

a) 20%	b) 25%	c) 32%	d) 27.5
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TYPE - IV

- 88. A trader marks his washing machine 30% above the cost price and offers a discount. Find the discount percentage if the trader makes a net profit of 4%.
- 89. After allowing a discount of 11.11%, a trader still makes a gain of 14.28%. At how many percent above the cost price does he mark his goods? (1997) a) 28.56% b) 35%
 c) 22.22% d) None

- 90. Pankaj bought an article at Rs. 400 and marked it at Rs. 600. He offered a discount and then sold it his profit/loss percentage and discount percentage are in the ratio 3 : 2. Find his profit/loss percentage?
 a) 29% profit
 b) 25% profit
 c) 20% loss
 d) 25% loss
- 91. After allowing a discount of 25%, a shopkeeper charges Rs. 480 for a watch. Had he not allowed any discount, he would have made a profit of 6 2/3%. Find the cost price of the watch.
- 92. The ratio of the marked price and cost price of an article is 3 : 2. If 2x% discount is given, it results in a loss of x%, find x.
- 93. A shopkeeper marks the price of his goods by 20% and then offers a discount of 10% and he also uses a false weight of x gms instead of a kg if his profit% is 35% find x?
- 94. A shopkeeper marks the price of his goods by 80% and then offers a discount of 25%. Besides he gets 20% more amount per kg from his supplier and sells x% less per kg to his customer. Find the value of x if profit is 80%?
- 95. Profit on selling 30 articles is the same as the selling price of 3 articles and discount on 40 articles is the same as selling price of 8 articles. Find Mark Up%?
- 96. Discount on selling 10 articles is the same as the selling price of 2 articles and markup on 20 articles is the same as mark price of 4 articles. Find profit%?
- 97. Discount on selling 20 articles is same as the selling price of 5 articles and gives 20% extra discount. Find effective discount percent?
- 98. The ratio of CP and SP of an article is 5:8 and the ratio of discount and profit is 3:5. Find the discount%?
- 99. The ratio of MP and SP of an article is 5:4 and the ratio of profit% and markup% is 3:5. Find the profit%?
- 100. If profit% is 4% and the ratio of markup% and discount% is 3:2. Find the markup%?
- 101. A shopkeeper marks up the price of an article by 100% and then offers three successive discounts of p%, q% and r% such that p + q + r = 30, find the maximum profit he can earn?
- 102. A shopkeeper bought an article for Rs.1000 and marked its price as Rs.2160. He gave three successive discounts of a%, b% and c%, where a + b + c = 50. If he made a profit of x% finally, how many of the following ranges contain values which are NOT possible values of x? in numerical value) a) 6 < x < 10b) 14 < x < 20c) 20 < x < 24d) 25 < x < 26
- 103. If the selling price of 10 oranges is equal to the cost price of 14 oranges, which, in turn, is equal to one-

third of the discount offered on 10 oranges, then find the profit/loss % when the markup% is halved and the discount % is decreased by 5% points.

Mixed

104. Shekhar makes 750 articles at a cost of 60 paisa per article. He fixes the selling price such that if only 600 articles are sold, he would have made a profit of 40% on the outlay. However, 120articles got spoilt and he was able to sell 630 articles at this price. Find his actual profit percent as the percentage of total outlay assuming that the unsold articles are useless.

a) 53% b) 42% c) 46% d) 47%

- 105. A manufacture undertakes to supply 2000 pieces of a particular component at Rs.25 per piece. According to his estimates, even if 5% fail to pass the quality tests, then he will make a profit of 25%. However as it turned out, 50% of the components were rejected. What is the loss% to the manufacture?
- 106. A manufacturer estimates that on inspection 12% of the articles he produces will be rejected. He accepts an order to supply 22,000 articles at Rs7.50 each. He estimates the profit on his outlay including the manufacturing of rejected articles, to be 20%. Find the cost of manufacturing each article. a) 6 b) 5.50 c) 5 d) 4.50
- 107. Ayushi bought 30 liters of milk at the rate of Rs.8 per liter. She got it churned after spending Rs.10



and 5kg of cream and 30 litres of toned milk were obtained. If she sold the cream at Rs.30 per kg and toned milk at Rs.4 per liter, his profit in the transaction is:

a) 20% b) 8% c) 30 d) 40%

Information for Ques 108 & 109: A watch dealer incurs an expense of Rs 150 for producing every watch. He also incurs an additional expenditure of Rs30, 000, which is independent of the number of watches produced. If he is able to sell a watch during the season, he sells it for Rs 250. If he fails to do so, he has to sell each watch for Rs 100. (1996)

- 108. If he is able to sell only 1200 out of the 1500 watches he has made in the season, then in the season he has made a profit of a) Rs. 90, 000 b) Rs. 75,000
 - c) Rs. 45,000 d) Rs. 60,000
- 109. If he produces 1500 watches, what is the number of watches that he must sell during the season in order to break even, given that he is able to sell all the watches produced?
 - a) 500 b) 700 c) 800 d) 1,000
- 110. A trader marks up the cost price of his commodities by 10% and while selling them uses a faulty weight of 1100 gms instead of a kg further, he offers a discount of 10% to all his customers. To his loyal customers, he offers a further discount of 5%. If he sells commodities to 20 loyal and 10 non-loyal customers. Find his overall profit/loss%?

CAT PREVIOUS YEAR QUESTIONS

- 111. A person spent Rs 50000 to purchase a desktop computer and a laptop computer. He sold the desktop at 20% profit and the laptop at 10% loss. If overall he made a 2% profit then the purchase price, in rupees, of the desktop is **CAT 2020**
- 112. In a group of people, 28% of the members are young while the rest are old. If 65% of the members are literates, and 25% of the literates are young, then the percentage of old people among the illiterates is nearest to CAT 2020

 a) 59
 b) 62
 c) 66
 d) 55
- 113. 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 **CAT 2020** a) 60 b) 50 c) 55 d) 54
- 114. In May, John bought the same amount of rice and the same amount of wheat as he had bought in April, but spent 150 more due to price increase of rice and wheat by 20% and 12%, respectively. If John had spent 450 on rice in April, then how much did he spend on wheat in May? **CAT 2020**

a) 590 b) 580 c) 560 d) 570

- 115. In the final examination, Bishnu scored 52% and Asha scored 64%. The marks obtained by Bishnu is 23 less, and that by Asha is 34 more than the marks obtained by Ramesh. The marks obtained by Geeta, who scored 84%, is **CAT 2020** a) 399 b) 439 c) 357 d) 417
- 116. In a class, 60% of the students are girls and the rest are boys. There are 30 more girls than boys. If 68% of the students, including 30 boys, pass an examination, the percentage of the girls who do not pass is [TITA] CAT 2019
- 117. Meena scores 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 CAT 2019

 a) 75
 b) 80
 c) 60
 d) 70
- 118. 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		CA	T 2019	
a) 28	b) 29	c) 31	d) 32	

- 119. On selling a pen at 5% loss and a book at 15% gain, Karim gains Rs. 7. If he sells the pen at 5% gain and the book at 10% gain, he gains Rs. 13. What is the cost price of the book in Rupees? CAT 2019

 a) 80
 b) 85
 c) 100
 d) 95
- 120. In 2010, a library contained a total of 11500 books in two categories - fiction and non-fiction. In 2015, the library contained a total of 12760 books in these two categories. During this period, there was a 10% increase in the fiction category while there was a 12% increase in the non-fiction category. How many fiction books were in the library in 2015? **CAT 2019** a) 6600 b) 6160 c) 6000 d) 5500
- 121. In an examination, the score of A was 10% less than that of B, the score of B was 25% more than that of C, and the score of C was 20% less than that of D. If A scored 72, then the score of D was. **CAT 2019**

22. Mukesh purchased 10 bicycles in 2017, all at the						
same price. He sold six of these at a profit of 25%						
and the remaining four at a loss of 25%. If he made						
a total profit of Rs. 2000, then his purchase price of						
a bicycle, in Rup	ees, was	CAT 2019				
a) 2000 b) 60	00 c) 8000) d) 4000				

- 123. A shopkeeper sells two tables, each procured at cost price p, to Amal and Asim at a profit of 20% and at a loss of 20%, respectively. Amal sells his table to Bimal at a profit of 30%, while Asim sells his table to Barun at a loss of 30%. If the amounts paid by Bimal and Barun are x and y, respectively, then (xy)/p equals a) 1 b) 1.2 c) 0.7 d) 0.50
- 124. In an examination, the maximum possible score is
N while the pass mark is 45% of N. A candidate
obtains 36 marks, but falls short of the pass mark
by 68%. Which one of the following is then correct?a) N \leq 200
c) N \geq 253b) 243 \leq N \leq 252
d) 201 \leq N \leq 242
- 125. Arun's present age in years is 40% of Barun's. In another few years, Arun's age will be half of Barun's. By what percentage will Barun's age increase during this period? (TITA) **CAT 2017**
- 126. Ravi invests 50% of his monthly savings in fixed deposits. Thirty percent of the rest of his savings is invested in stocks and the rest goes into Ravi's savings bank account. If the total amount deposited by him in the bank (for savings account and fixed deposits) is Rs 59500, then Ravi's total monthly savings (in Rs) is: (TITA) CAT 2017
- 127. If a seller gives a discount of 15% on retail price, she still makes a profit of 2%. Which of the following ensures that she makes a profit of 20%?
 - a) Give a discount of 5% on retail price
 - b) Give a discount of 2% on retail price
 - c) Increase the retail price by 2%

- d) Sell at retail price
- 128. The number of girls appearing for an admission test is twice the number of boys. If 30% of the girls and 45% of the boys get admission, the percentage of candidates who do not get admission is: CAT 2017

 a) 35
 b) 50
 c) 60
 d) 65
- 129. In a market, the price of medium quality mangoes is half that of good mangoes. A shopkeeper buys 80 kg good mangoes and 40 kg medium quality mangoes from the market and then sells all these at a common price which is 10% less than the price at which he bought the good ones. His overall profit is:
 CAT 2017

 a) 6%
 b) 8%
 c) 10%
 d) 12%
- 130. If Fatima sells 60 identical toys at a 40% discount on the printed price, then she makes 20% profit. Ten of these toys are destroyed in fire. While selling the rest, how much discount should be given on the printed price so that she can make the same amount of profit?
 CAT 2017

 a) 30%
 b) 25%
 c) 24%
 d) 28%
- 131. Out of the shirts produced in a factory, 15% are defective, while 20% of the rest are sold in the domestic market. If the remaining 8840 shirts are left for export, then the number of shirts produced in the factory is CAT 2017

 a) 13600
 b) 13000
 c) 13400
 d) 14000
- 132. In a village, the production of food grains increased by 40% and the per capita production of food grains increased by 27% during a certain period. The percentage by which the population of the village increased during the same period is nearest to

 a) 16
 b) 13
 c) 10
 d) 7
- 133. The manufacturer of a table sells it to a wholesale dealer at a profit of 10%. The wholesale dealer sells the table to a retailer at a profit of 30%. Finally, the retailer sells it to a customer at a profit of 50%. If the customer pays Rs 4290 for the table, then its manufacturing cost (in Rs) is CAT 2017

 a) 1500
 b) 2000
 c) 2500
 d) 3000
- 134. Mayank buys some candies for Rs 15 a dozen and an equal number of different candies for Rs 12 a dozen. He sells all for Rs 16.50 a dozen and makes a profit of Rs 150. How many dozens of candies did he buy altogether? a) 50 b) 30 c) 25 d) 45
- 135. Amal purchases some pens at ₹ 8 each. To sell these, he hires an employee at a fixed wage. He sells 100 of these pens at ₹ 12 each. If the remaining pens are sold at ₹ 11 each, then he makes a net profit of ₹ 300, while he makes a net loss of ₹ 300 if the remaining pens are sold at ₹ 9 each. The wage of the employee, in INR, is
- 136. A box has 450 balls, each either white or black, there being as many metallic white balls as metallic black balls. If 40% of the white balls and 50% of the



black balls are metallic, then the number of nonmetallic balls in the box is

137. Anil, Bobby and Chintu jointly invest in a business and agree to share the overall profit in proportion to their investments. Anil's share of investment is 70%. His share of profit decreases by ₹ 420 if the overall profit goes down from 18% to 15%. Chintu's share of profit increases by ₹ 80 if the overall profit goes up from 15% to 17%. The amount, in INR, invested by Bobby is

a) 2400	b) 2200
c) 2000	d) 1800

- 138. Raj invested ₹ 10000 in a fund. At the end of first year, he incurred a loss but his balance was more than ₹ 5000. This balance, when invested for another year, grew and the percentage of growth in the second year was five times the percentage of loss in the first year. If the gain of Raj from the initial investment over the two year period is 35%, then the percentage of loss in the first year is

 a) 15
 b) 5
 c) 10
 d) 70
- 139. One part of a hostel's monthly expenses is fixed, and the other part is proportional to the number of its boarders. The hostel collects ₹ 1600 per month from each boarder. When the number of boarders

is 50, the profit of the hostel is ₹ 200 per boarder, and when the number of boarders is 75, the profit of the hostel is ₹ 250 per boarder. When the number of boarders is 80, the total profit of the hostel, in INR, will be

a) 20800	b) 20200
c) 20500	d) 20000

c) 68.25

- 140. The total of male and female populations in a city increased by 25% from 1970 to 1980. During the same period, the male population increased by 40% while the female population increased by 20%. From 1980 to 1990, the female population increased by 25%. In 1990, if the female population is twice the male population, then the percentage increase in the total of male and female populations in the city from 1970 to 1990 is a) 68.75 b) 68.50
- 141. In a tournament, a team has played 40 matches so far and won 30% of them. If they win 60% of the remaining matches, their overall win percentage will be 50%. Suppose they win 90% of the remaining matches, then the total number of matches won by the team in the tournament will be

 a) 86
 b) 84
 c) 78
 d) 80

d) 69.25

1. a) 900 b) 1600 c) 2250 d) 238		2. a) Aman b) CND		3. a) 25% more b) 20% less c) 125% d) 80%		4. a) 20% less b) 50% more	
5. B	6. C	7. C	8. B	9. B	10. B	11. 324	12. 1750
13. A	14. C	15. 12.63%	16. D	17. A	18. C	19. 20,250	20. D
21. C	22. a) 200% b) 40%	23. 124.3904%	24. a) -25% b) +50%	25. a) 28 b) 37	.56% .5%	26. a) 16% de b) 6.25% dec	ecrease rease
27. A	28. A	29. CBD	30. 5:3	31. A	32. D	33. D	34. B
35. D	36. B	37. D	38. C	39. C	40. B	41. A	42. D
43. B	44. A	45. D	46. 45%	47. D	48. A	49. C	50. A
51. 1750	52. 600	53. B	54. C	55. A	56. C	57. A	58. 22.22%

ANSWER KEY PERCENTAGE

ANSWER KEY PROFIT & LOSS

59.	60. a) No profit & los	s, b) 4% loss	61. No profit & loss	62. Rs. 1500	63. 16 2/3%
64. 334	65. Rs. 3800	66. 12 8/41%	67. C	68. 160	69. 37.5% profit
70. 15% loss	71. 88% loss	72. 25%	73. 48	74. 28	75. 29 1/6% loss
76. 38 8/9% loss	77. 120	78. a) 25% profit, b) 20%, c) 33.33%			79. 11.11%
80. 50%	81. 40 5/8%	82. 50%	83. 20%	84. 15% profit	85. 875 gm
86. 100%	87. C	88. 20%	89. C	90. B	91. 600
92. 12.5	93. 800 gm	94. 4%	95. 33.33%	96. 4 1/6%	97. 36%
98. 18 18/49%	99. 60%	100. 30%	101. 45.8%	102. D	103. 5% profit
104. D	105. Rs. 13000	106. B	107. B	108. B	109. B
110. 13% loss	111. 20,000	112. C	113. B	114. C	115. A
116. 20%	117. D	118. C	119. A	120. A	121. 80
122. D	123. A	124. B	125. 20	126. 70,000	127. D
128. D	129. B	130. D	131. B	132. C	133. B
134. A	135. 1000	136. 250	137. C	138. C	139. C
140. A	141. B				