Lecture-5 : Profit & Loss (MCQ)

Important Facts

- **Cost Price:** The price, at which an article is purchased, is called its cost price, abbreviated as C.P.
- **Selling price:** The price, at which an article is sold, is called its selling price, abbreviated as S.P.
- **Profit or Gain:** If S.P. is greater than C.P. the seller is said to have a profit or gain.
- **Loss:** If S.P. is less than C.P., the seller is said to have incurred a loss.
- **Gain** = (S.P) – (C.P.)
- **Loss** = (C.P.) – (S.P.)
- Loss or gain is always reckoned on C.P.
- If an article is sold at a gain of say, 35%, then S.P. = 135% of C.P.
- If an article is sold at a loss of say, 35%, then S.P. = 65% of C.P.

01. When an article is sold for Tk. 250, the seller makes 25% profit. What is the cost of the article
a) 150 b) 180 c) 200 d) None

02. If 5% is more gained by selling an article for Tk. 350 than selling it for Tk. 340, the cost of the article is:
a) Tk. 180 b) Tk. 150 c) Tk. 200 d) Tk. 250

03. X sells a product to Y and makes a profit of 25%. Y sells it to Z at a loss of 20%. If Z buys it for Tk. 140, what price did X pay for it?
a) 210 b) 175 c) 140 d) 126

04. There will be a loss of 10%, if a chair is sold for tk. 540. At what price should the chair be sold to make a profit of 20%?
a) 600 b) 540 c) 700 d) 720

05. A chair was sold at a loss of 8%. If the chair was sold at a profit of 7%, the seller would get Tk. 300 more. What is the cost price of the chair in Taka? [IBA, MBA]
a) 1800 b) 2000 c) 2250 d) 2400

06. By selling a book for Tk. 56, gain is as much percent as it costs in taka. Cost price is:
a) Tk. 44 b) Tk. 40 c) Tk. 36 d) Tk. 30

07. On selling 17 balls at Tk. 720, there is a loss equal to the cost price of 5 balls. The cost price of a ball is-
a) 45 b) 50 c) 55 d) 60

08. A man sells 2 commodities for Tk. 4000 each, neither losing nor gaining in the deal. If he sold one commodity at a gain of 25% then what is the cost price of another commodity? [20 Based Combined SO: 20-01-2023]
a) tk. 3200 b) Tk. 4800
c) Tk. 4000 d) Tk. 3600

09. A person makes a profit of 10% on 25% of the quantity and a loss of 20% on the rest. What is the percentage gain or loss on the whole?
a) 10% b) 12.5% c) 12% d) 25%

10. Alam sold two vehicles for Tk 46,000 each. If he gained 10% on the first and lost 10% on another, then what is his percentage profit or loss in this transaction?
a) 1% loss b) 1% profit
c) 3& profit d) 2.56% loss

11. If selling price is doubled, profit triples. Find the profit percent.
a) 100% b) 130% c) 150% d) 140%

12. By selling 100 pens, a stationer gains the selling price of 20 pens. Find his gain per cent.
a) 20% b) 25% c) 30% d) 40%

13. The selling price of 8 apples is equal to the purchase price of 10 apples? What is the profit margin?
a) 20% b) 15% c) 10% d) 25%

14. The cost price of 20 articles is the same as the selling price of X articles. If the profit is 25%, value of X is:
a) 12 b) 14 c) 16 d) 18

15. Mr. Sakib purchased 12 mangoes for Tk. 10 and sold 10 mangoes for Tk. 12. What was his profit margin-?
a) 25% b) 32% c) 36% d) 44%

16. By selling 32 guavas for Tk. 30 at the rate of Tk. 1.066 per guava a man loss 25%. How many guavas should be sold for Tk. 18 to gain 20% profit?
a) 24 b) 12 c) 18 d) 36

17. A trader buys two televisions for Tk. 80,000. He sells one of them at a profit of 20% and the other at a loss of 12% and makes no profit or loss at the end. What is the cost price of the article that he sold at loss?
a) 20,000 b) 30,000 c) 40,000 d) 50,000

18. A retailer buys a radio from the wholesaler for Tk. 80. He then marks up the price by 25% and sales at a discount of 10%. What is his profit on the radio?
a) 8 b) 6 c) 4 d) 10

19. A trader sells his goods at a discount of 20%. He still makes a profit of 25%. If he sells the goods at the marked price only, his profit will be:
a) 56.25% b) 25.56% c) 50.25% d) 54.25%

20. A trader makes a loss of 10% by selling a chair at a discount of 28% on the listed price. What will be his profit/loss percentage if he sells the chair at 90% of its listed price?
a) 10% Loss b) 12.50% Profit
c) 13.60% Profit d) 15% Loss

21. A grocer sells rice at a profit of 10% and uses weights which are 20% less than the market weight. The total gain earned by him will be
a) 30% b) 35% c) 37.5% d) 40%

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Illustrative Questions | Profit & Loss

1. A desk is bought for Tk. 475 and sold for Tk. 570. Find the gain percent.

Sol. C.P =Tk. 475 and S.P. =Tk. 570.

Gain =Tk. (570–475) =Tk. 95.

$\text{Gain\%} = \left(\frac{95}{475} \times 100\right)\% = 20\%.$

2. A bicycle is bought for Tk. 1530 and sold forTk. 1275. Find the loss percent.

Sol. C.P. =Tk. 1530 and S.P. =Tk. 1275.

Since (S.P.) < (C.P.), so there is loss.

Loss =Tk. (1530 – 1275) =Tk. 255.

$\text{Loss\%} = \left(\frac{255}{1530} \times 100\right)\% = \frac{50}{3}\% = 16\frac{2}{3}\%.$

3. A bed sheet is sold for Tk. 405 at a gain of 8%. Find its cost price.

Sol. Let the C.P. beTk. x.

Then S.P. = 108% ofTk. x = Tk. $\left(\frac{108}{100} \times x\right)$ = Tk. $\frac{27x}{25}$

$\therefore \frac{27x}{25} = 405 \Rightarrow x = \frac{405 \times 25}{27} = 375.$

$\therefore$ C.P. = Tk. 375.

4. A chair is sold for Tk. 705 at a loss of 6%. Find its cost price.

Sol. Let the C.P. be Tk. x.

Then, S.P = 94% of Tk. x = (Rs $\left(\frac{94}{100} \times x\right)$ =Rs $\frac{47x}{50}$.

$\therefore \frac{47x}{50} = 705 \Rightarrow x = \left(705 \times \frac{50}{47}\right) = 750.$

$\therefore$ C.P. = Tk. 750.

5. A man lost 10% by selling a bicycle for Tk. 1530. What percent shall he gain by selling it for Tk. 1819?

Sol. S.P = Tk. 1530, Loss = 10%.

C.P. = Tk. $\left(\frac{100}{90} \times 1530\right)$ = Tk. 1700.

Now, C.P = Tk. 1700, New S.P. = Tk. 1819.

Gain = Tk. (1819–1700) = Tk. 119.

$\text{Gain\%} = \left(\frac{119}{1700} \times 100\right)\% = 7\%.$

6. Bananas are bought at 6 for Tk. 5 and sold at 8 for Tk. 11. Find the gain or loss per cent.

Sol. Suppose that the number of bananas bought = L.C.M of 6 and 8 = 24.

S.P. of 24 bananas = Tk. $\left(\frac{5}{6} \times 24\right)$ = Tk. 20.

S.P. of 24 bananas = Tk. $\left(\frac{11}{8} \times 24\right)$ Rs 33.

Gain = Tk. (33–20) = Tk. 13.

$\therefore \text{Gain\%} = \left(\frac{13}{20} \times 100\right)\% = 65\%.$

7. If the selling price of 10 apples is the same as C.P. of 8 apples, find the loss percent.

Sol. Let the C.P. of each apple be Re 1.

Then, C.P. of 10 apples = Tk. 10.

S.P. of 10 apples = Tk. 8.

$\therefore$ Loss = Tk. (10 – 8) = Tk. 2.

$\text{Loss\%} = \left(\frac{2}{10} \times 100\right)\% = 20\%.$

8. A trader lists his articles at 15% above cost price and allows a discount of 8% on cash payment. Find his gain per cent.

Sol. Let the C.P. be Tk. 100.

Then, M.P. = Tk. 115.

S.P. = (100–8)% of Tk. 115 = 92% of Tk. 115

= Tk. $\left(\frac{92}{100} \times 115\right)$ = Tk. $\frac{529}{5}$ = Tk. 105.80.

$\therefore$ Gain% = (105.8-100)% = 5.8%.

9. The marked price of a book is Tk. 160 and it is sold for Tk. 136. What is the rate of discount?

Sol. M.P. = Tk. 160 and S.P. = Tk. 136.

$\therefore$ Discount = Tk. (160 – 136) = Tk. 24.

10. Sunil buys an article with 25% discount on its marked price. By selling it for Tk. 330, he makes a profit of 10%. Find its marked price.

Sol. Let the M.P. be Tk. x.

C.P. = 75% of Tk. x = Tk. $\left(\frac{75}{100} \times x\right)$ = Tk. $\frac{3x}{4}$.

Gain = 10%.

$\therefore$ S.P. = 110% of Tk. $\frac{3x}{4}$ = Tk. $\left(\frac{3x}{4} \times \frac{110}{100}\right)$ = Tk. $\frac{33x}{40}$.

$\therefore \frac{33x}{40} = 330 \Rightarrow x = \frac{330 \times 40}{33} = 400.$

Hence, the marked price is Tk. 400.

11. A dealer offers a discount of 10% on the marked price of an article and still makes a profit of 20%. If the marked price is Tk. 1200, find its cost price.

Sol. M.P. = Tk. 1200, Discount = 10%

S.P = 90% of Tk. 1200 = Tk. $\left(1200 \times \frac{90}{100}\right)$ = Tk. 1080.

Now, S.P. = Tk. 1080, profit = 20%.

$\therefore$ C.P. = Tk. $\left(\frac{100}{120} \times 1080\right)$ = Tk. 900.

Hence, its cost price is Tk. 900.

12. Rashmi purchased a cooker at $\frac{9}{10}$th of its marked price and sold it for 8% more than its marked price. Find her gain percent.

Sol. Let the marked price be Tk. x.

Then, C.P = Tk. $\frac{9x}{10}$.

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S.P. = 108% of Tk. x = Tk. $\left(x \times \frac{108}{100}\right)$ = Tk. $\frac{27x}{25}$.

Gain = Tk. $\left(\frac{27x}{25} - \frac{9x}{10}\right)$ = Tk. $\frac{(108x-90x)}{100}$ = Tk. $\frac{18x}{100}$.

Gain% = $\left(\frac{18x}{100} \times \frac{10x}{9x} \times 100\right) = 20\%$.

13. While selling a watch a shopkeeper gives a discount of 5%. If he gives a discount of 7%, he earns Tk. 25 less as profit. Find the marked price of the watch.

Sol. Let the M.P. be Tk. x. Then

(95% of Tk. x) – (93% of Tk. x) = Tk. 25

$\Rightarrow \left(\frac{95}{100} \times x\right) - \left(\frac{93}{100} \times x\right) = 25$

$\Rightarrow 2x = 2500 \Rightarrow x = 1250$.

∴ Marked price of the watch is Tk. 1250.

14. A dishonest dealer professes to sell his goods at cost price but uses a weight of 960 gms for a kg. weight. Find his gain percent.

Sol. Gain % = $\left[\frac{\text{Error}}{\text{True Value} - (\text{Error})} \times 100\right]\%$

$\left(\frac{40}{960} \times 100\right)\% = 4\frac{1}{6}\%$.

15. A dishonest dealer sells his goods at 10% loss on cost price but uses 20% less weight. What is his profit or loss per cent?

Sol. Here, x = 10% and y = 20%

According to the formula,

Required answer = $\left(\frac{y-x}{100-y} \times 100\%\right)$

$= \frac{(20-10)}{(100-20)} \times 100\%$

= 12.5% gain

Home Practice	Profit & Loss

01. At what profit percent must an article be sold so that by selling at half that price, there will a loss of 30%. [Janata Officer (RC) – 28-06-2024]

a) 25% b) 36% c) 42% d) 40%

02. A person buys certain number of marbles at 20 per taka and an equal number at 30 per taka. He mixes them and sells them at 25 per taka. His gain or loss in the transaction is- [21 Based Combined Officer General: 2024]

a) 2% loss b) 4% loss
c) 2% gain d) 4% gain

03. The profit earned by selling an article for Tk. 900 is double the loss incurred when the same article is sold for Tk. 450. At what price should the article be sold to make 25% profit? [BB-AD: 20-10-23]

a) Tk. 750 b) Tk. 800
c) Tk. 600 d) Tk. Data Inadequate

04. A man purchases two clocks A and B at a total cost of Tk. 650. He sells A with a 20% profit and B at a loss of 25% and gets the same selling price for both clocks. What are the purchasing prices of A and B respectively? [BB-AD: 20-10-23]

a) 225, 425 b) 273, 375
c) 300, 350 d) 250,400

05. A passenger paid 50% customs duty on accompanied baggage items. He paid another 20% sales tax on the total value of the items plus the custom duty paid. The total custom duty and sales tax is Tk. 350. What is the value of the item custom duty and sales tax? [BB-AD: 28-10-22]

a) Tk. 400 b) Tk. 450
c) Tk. 500 d) None of these

06. A merchant has 1000 kg of sugar, part of which he sells at 8% and the remaining at 18% profit. He gains 14% on the whole Find the quantity of sugar that he sold at 18% profit. [BB-AD: 28-10-22]

a) 400 kg b) 560 kg
c) 600 kg d) 640 kg

07. A machine is sold at a profit of 10%, Had it been sold for Tk. 40 less, there would have been a loss of 10%. What was the cost price? [21 Based Combined SO: 10-11-23]

a) Tk. 175 b) TK. 200
c) Tk. 225 d) Tk. 250

08. A Salesman usually makes 45% profit on every TV he sells. During a sale, he reduces his margin of profit to 40%, while his sales increase by 10%. What is the ratio of his new profit his usual profit? [BD Gas Fields - AM Exam - 2017]

a) 9 : 8 b) 9 : 10
c) 11 : 10 d) 44 : 45

09. A fruit salad is made by mixing 3 kgs of mango costing Tk. 120 per kg and 2 kgs of papaya costing Tk. 100 per kg and 2 kgs of grapes costing Tk. 140 per kg. At what price (in Taka) per kg should the mixture be sold to make a profit of 25 percent? [বাখরবাদ গ্যাস এ.এম (জেনারেল) পরীক্ষা - ২০১৭]

a) 125 b) 150
c) 175 d) None of these

10. A dress on sale in a shop is marked at Tk. Z. During the discount sale its price is reduced by 15%. Staffs are allowed a further 10% reduction on the discounted price. If a staff member buys the dress what will she have to pay in terms of Z? [BPEX - AM Exam - 2017]

a) 0.75Z b) 0.76Z c) 0.756Z d) None

11. By selling a book at 600 taka, Salim makes a profit of 25%. What was the cost of the book in taka? [BD Gas Fields - AM Exam - 2021]

a) 480 b) 500 c) 520 d) 540

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12. **In a store, pens are sold for 25% less than the tag price. If a pen costs Tk. 48. What will be the tag price of the pen to make a 25% profit on its cost?** [BPEX - AM Exam - 2023]
a) 64 b) 72
c) 80 d) None of these

13. **Asad went to the market to buy 12 oranges. But he found that he had the money to buy only 10 oranges. he calculated that if the price per piece of orange was Tk. 3 less, he could have bought 12 oranges. How much money did Asad have?** [Titas Gas AM (General) Exam - 2021]
a) 150 b) 160 c) 175 d) 180

14. **In a certain store, the profit is 320% of the cost, if the cost increases by 25% but the selling price remains constant, approximately what percentage of the selling price is the profit?** [Titas Gas AM (General) Exam - 2021]
a) 30 b) 70 c) 100 d) 250

15. **When an article is sold for Tk. 250, the seller makes 25% loss. What is the cost of the article?** (BB AD 2001)
a) 200 b) 180 c) 150 d) 333.33

16. **By selling an article for Tk. 100, a man gains Tk. 15. Then, his gain% is:** [Pubali Bank Ltd (SO)-2017]
a) 15 b) $12\frac{2}{3}$ c) $17\frac{11}{17}$ d) $17\frac{1}{4}$

17. **If the selling price of an article is $\frac{4}{3}$ of its cost price, the profit in the transaction is:** (BB AD-2016)
a) $16\frac{2}{3}$ % b) $20\frac{1}{2}$ % c) $25\frac{1}{3}$ % d) $33\frac{1}{3}$ %

18. **A shopkeeper purchases 70 kg of potatoes for Tk. 420 and sold the whole lot at the rate of Tk. 6.50 kg. What will be his gain in percentage?** [Agrani Bank- (SO) 2017 Canceled]
a) $4\frac{1}{6}$ % b) $6\frac{1}{4}$ % c) $8\frac{1}{3}$ % d) 20%

19. **What is the purchase price of an article if the profit by selling it for Tk. 250 is 25%?** [BKB- (SO)-2017]
a) 150 b) 180 c) 200 d) 210

20. **A pen is sold for Taka 48 with a 20% profit. What is the purchase price of the pen?** [BKB (officer)-2017]
a) 32 b) 40 c) 48 d) 57.6

21. **If the cost price is 25% of selling price then what is the profit percent?** [Agrani-(SO) 2017-canceled]
a) 100% b) 200% c) 300% d) 350%

22. **The ratio of the cost price and the selling price is 4:5. The profit percent is-** [Agrani (SO) 2017Canceled]
a) 25% b) 10% c) 20% d) 30%

23. **Find the ratio of purchase price to sell price if there is loss of 12.5%?** (AEO-RC)-2017]
a) 7:8 b) 8:7 c) 2:25 d) 25:2

24. **A shopkeeper expects a gain of 22.5% on his cost price. If in a week, his selling was of Tk. 392, what was his cost price?** [Exim Bank Cash Off 2013]
a) 220 b) 350 c) 320 d) 250

25. **A book sells for Tk. 65. This price gives the seller a profit 30% on his cost. What will be the new selling price if he cuts his profit to 10% of the costs?**
a) 55 b) 50 c) 45 d) None

26. **A retail buyer purchases 15 white dress shirts for Tk. 1,000 and 5 striped dress shirts for Tk. 400. At what average price (in Tk.) the retailer should sell a dress shirt if he wants to make a profit of Tk. 50- each shirt?** (Agrani Bank Offi:2010)
a) 150 b) 180 c) 120 d) None

27. **The profit earned by selling an article for Tk. 832 is equal to the loss incurred when the same article is sold for Tk. 448. What should be the sale price for making 50% profit?**
a) Tk. 950 b) Tk. 925
c) Tk. 960 d) Tk. 900

28. **An article when sold at a gain of 5% yields Tk. 15 more than when sold at a loss of 5% Its cost price would be: (BB AD-2014)**
a) 150 b) 200 c) 250 d) 300

29. **The cost price of 19 articles is same as the selling price of 29 articles. What is loss percentage?** [Combined 6 Banks & 2FIs(SO)-2019]
a) 52.30% b) 35.00%
c) 34.48% d) 30.00%

30. **The selling price of 15 articles equals the cost of 20 items. What is the percentage profit earned by the seller?** (BB AD 2012)
a) 32.20% b) 12.10%
c) 33.33% d) 48.30%

31. **Alam sold two vehicle for Tk 46,000 each. If he gained 10% on the first and lost 10% on another, then what is his percentage profit or loss in this transaction?** [Combined 2 Banks- (off)-2018]
a) 2% loss b) 1% profit
c) 3& profit d) 2.56% loss

32. **A shopkeeper gains 17% after allowing a discount of 10% on the marked price of an article. Find his profit percent if the article is sold at marked price allowing no discount.**
a) 30% b) 37% c)23% d) 27%

33. **A shopkeeper earns a profit of 12% on selling a book at 10% discount on the printed price. The ratio of the cost price and the printed price of the book is?** [Combined 5 banks (Cash)-2019]
a) 45:56 b) 45:51 c) 47:56 d) 47:51

34. **A shopkeeper gains 17% after allowing a discount of 10% on the marked price of an article. Find his profit percent if the article is sold at marked price allowing no discount.** [Combined 2 Banks-(off)-2018]
a) 30% b) 37% c) 23% d) 27%

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35. **Two lots of onions with equal quantity, one costing Tk. 10 per kg and the other costing Tk. 15 per kg are mixed together and whole lot is sold at TK. 15 per kg. What is the profit or loss?** [Combined 2 banks (S+J) (Off-IT)-2019]
a) 10% loss b) 10% profit
c) 20% loss d) 20% Profit

36. **By selling 12 toffees for a Taka, a man loses 20%. How many for a Taka should he sell to get a gain of 20%?**
a) 12 b) 9 c) 8 d) 5

37. **If the cost price of 12 pen is equal to the selling price of 8 pens; gain percent is:**
a) 30% b) 25% c) 50% d) 70%

38. **If the selling price of 50 pen is equal to the cost price of 40 pens; gain/loss percent is:**
a) loss 20% b) gain 30%
c) loss 25% d) No gain no loss

39. **A shopkeeper purchased 70 kg of potatoes for Tk. 350 and sold the whole lot at the rate of Tk. 6.50 per kg. What will be the gain percentage?**
a) 10% b) 30% c) 50% d) 75%

40. **Atik sells an article which costs him Tk. 400 to Badsha at a profit of 20%. Badsha then sells it to Chandra making a profit of 10% on the price he paid to Atik. How much does Chandra pay to Badsha?**
a) Tk. 178 b) Tk. 476
c) Tk. 480 d) Tk. 528

41. **Panna purchased a machine for Tk. 80,000 and spent Tk. 5000 on repair and Tk. 1000 on transport and finally sold it with 25% profit. At what price did he sell the machine?**
a) Tk. 107830 b) Tk. 107500
c) Tk. 104825 d) Tk. 105280

42. **When an article is sold for Tk. 18,700, the owner loses 15%. At what price must the article be sold in order to gain 15%?**
a) Tk. 22450 b) Tk. 25300
c) Tk. 25500 d) Tk. 25000

43. **Shahed sells an article for Tk. 600 and makes a profit of 50% from the deal. Had he sold it for Tk. 400, then what percent of loss or gain he would have made?**
a) loss 10% b) gain 30%
c) loss 25% d) No gain no loss

44. **A man gains 20% by selling an article for a certain price. If he sold it double the price, what would be the profit percentage?**
a) 100% b) 130%
c) 150% d) 140%

45. **By selling an article, Mr. Zaman earned a profit equal to $\frac{1}{4}$ of the price he bought it. If he sold it for Tk. 375, what is the cost price?**
a) Tk. 450 b) Tk. 525
c) Tk. 550 d) Tk. 300

46. **In a certain store, the profit is 320% of the cost. If the cost increases by 25% but the selling price remain unchanged, approximately what percentage of the selling price is the profit?**
a) 30% b) 25% c) 50% d) 70%

47. **The profit earned by selling an article for Tk. 900 is double the loss incurred when the same article is sold for Tk. 450. What should be the sale price for making 25% profit?**
a) Tk. 750 b) Tk. 725
c) Tk. 760 d) Tk. 700

48. **A fruit seller professes to sell his fruits at cost price, but still gains 25% on his outlay. What weight does he substitute for a kilogram?**
a) 800 gm b) 850 gm
c) 890 gm d) 900 gm

49. **Two lots of onions with equal quantity, one costing Tk. 10 per kg and the other costing Tk. 15 per kg are mixed together and whole lot is sold at TK. 15 per kg. What is the profit or loss?** [Combined 2 banks off, 19]
a) 10% loss b) 10% profit
c) 20% loss d) 20% Profit

50. **A dealer sells his goods at 20% loss on cost price but uses 40% less weight. What is his % profit or loss?**
a) $33\frac{2}{3}$ % b) $33\frac{1}{3}$ %
c) $33\frac{3}{4}$ % d) 33%

51. **A merchant has 1000 kg of sugar, part of which he sells at 8% and the remaining at 18% profit. He gains 14% on the whole Find the quantity of sugar that he sold at 18% profit.** [BB-AD: 2022]
a) 400 kg b) 560 kg
c) 600 kg d) 640 kg

52. **X sells an item to Y at a profit of 28% on his cost and sells the same item to Z at a loss of 25% on his cost. If Y thus sold the item to Z, a Tk. 2 less than the item to X, then what is the cost of the item to X?** [BB- Officer General: 2022]
a) Tk. 200 b) Tk. 150
c) Tk. 100 d) Tk. 50

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