



Profit & Loss - 01

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Previous Year Question

- Aslam bought 5 apples at Taka 10 and sold 4 apples at Taka 10. What will be the rate of profit? [Officer (General)-22]
- 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 Bank Cash 19, Combined 5 Bank Cash 21]
- A grocer buys some eggs at Tk. 3 each. He finds that 12 of them are broken, but he sells the others at Tk. 4 each and makes profit of Tk. 96. How many eggs did he buy? [BDBL SO 17, BKB Cash 17]

- Peter purchased a machine for Tk. 80,000 and spent Tk. 5000 on repair and Tk. 1000 on transport and sold it with 25% profit. At what price did he sell the machine? **[BB Cash 16. Pabuli SO & O 14]**
- If selling price of an article is of its cost price, the profit in the transaction is- **[BB AD 16]**
- When a plot is sold for Tk. 18,700, the owner loses 15%. At what price must the plot be sold in order to gain 15%? **[Pubali SO & O 14]**
- Alam sold an item for Tk. 6384 and incurred a loss of 30%. At what price should he have sold the item to have gained a profit of 30%? **[Comb 3 Banks Cash 18]**

- A lamp is manufactured to sell of \$35.00, which yields a profit of 25% of cost. If the profit is to be reduced to 15% of cost, what will be the new retail price of the lamp? [Janata Bank EO 17]
- ✓ If 5% more is gained by selling an article for Tk. 350 than by selling it for Tk. 340, the cost of the article is: [BDBL Officer 14, Rupali Cash 18, BDBL SO 17, HBFC SO 17, Uttara PO 17, Combined 8 Banku SO 21, NRBC TO 22]
- A shopkeeper purchases 15 mangoes for Tk. 10 and sells them at 10 mangoes for Tk. 15. Thus, he earns a profit of- [Combined 5 Banks Cash 22 (2018 based)]
- The cost price of 19 articles is same as the selling price of 29 articles. What is loss percentage? [Combined 8 Banks SO 19]

Vocabulary Section

Advertise → বিজ্ঞাপন দেওয়া

Approximate → আনুমানিক

Approximately → প্রায়

Article → পণ্য

Assuming → ধরে নিয়ে

Balance → নিষ্টি

Blend → মিশ্রিত করা

Charge → দাম ধরা

Churned → পাস্তুরিত

Claim → দাবি করা

Component → উপাদান, পণ্য, বস্তু

Comprise → গঠন করা

Consignment → চালান

Constant → ধ্রুবক, একই

Consumer → ভোক্তা

Consumer Product → ভোগপণ্য

Contain → ধারণ করা

Contemplate → মনস্থ করা, ভাবা

Cost price → ক্রয়মূল্য

Dairyman → গোয়ালী

Determine → নির্ণয় করা

Direction → নির্দেশনা

Equivalent → সমতুল্য

Expect → আশা করা

Expense → খরচ

Extent → ব্যাপ্তি

Faulty → ত্রুটিযুক্ত

Goods → পণ্য

Groundnut → চিনা বাদাম

In term of → প্রেক্ষিতে

Increase → বাড়ানো

Increase → হওয়া

Identically → অভিন্নরূপে

Information → তথ্য

Installation → প্রতিস্থাপন

Investment → বিনিয়োগ

Lot → চালান

Manufacturer → প্রস্তুতকারক

Milkman → গোয়ালী

Occupancy → দখল

Octroi → শুল্ক, চুঙ্গীকর

Outlay → মূলধন

Overall → সর্ব সাবুল্যে, মোট

Product → পণ্য

Profess → ভান করা

Purchase → ক্রয় করা

Quantity → পরিমাণ

Vocabulary Section

Ratio → অনুপাত

Rebate → হ্রাস করা

Reckoning → হিসাবকরণ

Refrigerator → ফ্রিজ, হিমায়ক

Remainder → অবশিষ্টাংশ

Respectively → যথাক্রমে

Shopkeeper → দোকানদার

Stockiest → মজুদদার

Subsequent → পর্যায়ক্রমিক

Substitute → প্রতিস্থাপন করা

Successively → ধারাবাহিকভাবে

Toned milk → ননী তোলা দুধ

Transaction → লেনদেন

Transportation → যাতায়ত

Undertake → দায়িত্ব নেওয়া

Uniform → সুষম

Weight → ওজন

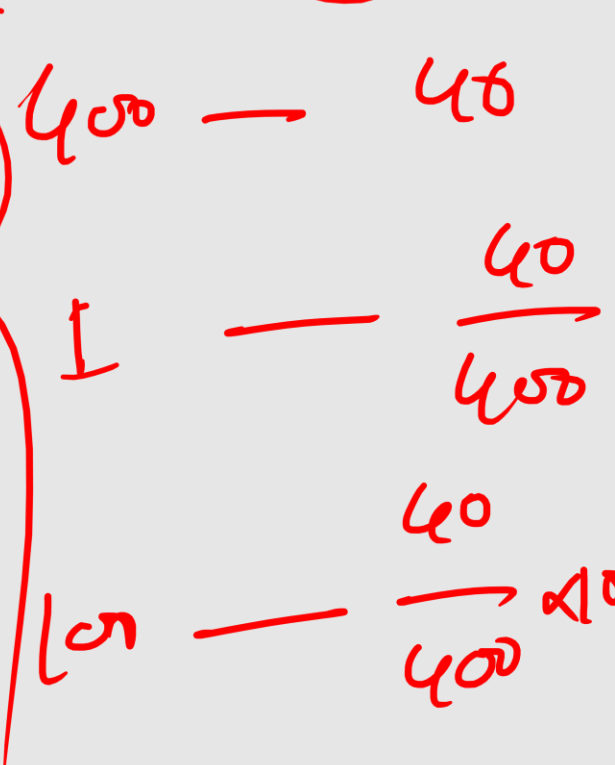
একটি পণ্যের ক্রয়মূল্য 400 টাকা এবং বিক্রয়মূল্য 440 টাকা হলে লাভের হার কত?

$$\text{CP} \rightarrow 400$$

$$\text{SP} \rightarrow 440$$

$$\text{profit} = 440 - 400 = 40$$

$$\frac{40}{400} \times 100 \% =$$



একটি পণ্যের ক্রয়মূল্য 400 টাকা হলে 10% লাভে বিক্রয়মূল্য কত??

SP 100% — 110%

CP = 400

profit % = 10%

$SP = 110\% \text{ of } 400$

$\text{profit} = 10\% \text{ of } 400$
 $= \frac{10}{100} \times 400 = 40$
 $SP = 400 + 40 = 440$

$= \frac{110}{100} \times 400$
 $= 440$

400 + 400 or 10%

একটি পণ্যের ক্রয়মূল্য 400 টাকা হলে 10% ক্ষতিতে বিক্রয়মূল্য কত??

100%

90%

$$\begin{aligned} \text{SP} &= \underline{\underline{90\%}} \text{ of } 400 \\ &= \frac{90}{100} \times 400 \\ &= \underline{\underline{360}} \end{aligned}$$

$$\begin{aligned} \text{Loss} &= 10\% \text{ of } 400 \\ &= \underline{\underline{40}} \end{aligned}$$

Type-1

Profit & Loss Percentage

400 - 400 ₹, 10%.

400 ₹, 90%.

Q1: Nafiza bought a ticket of a cricket match for Tk. 25 and later sold the ticket to Raida for Tk 75. What was the percent increase in the price of the ticket? [Combined (Off-Cash)-2023 (2021 Based)]

$$CP \rightarrow 25$$

$$SP \rightarrow 75$$

$$\begin{aligned} \text{Profit} &= 75 - 25 \\ &= 50 \end{aligned}$$

$$\begin{aligned} \text{profit \%} &= \frac{50}{25} \times 100\% \\ &= 200\% \end{aligned}$$

The CP of a ticket Tk. 25

" SP of . . . Tk. 75

$$\text{profit} = 75 - 25 = 50$$

profit percentage =

Q2: If the cost price is 25% of selling price, then what is the percentage of profit? Combined (Off:)-2022 (2019 Based)

Let, selling price is = $\text{TK} \cdot \underline{100}$

So, CP is = 25% of 100

$$= \text{TK} \cdot \underline{25}$$

$$\text{profit} = 100 - 25 = \text{TK} \cdot \underline{75}$$

$$\text{profit percentage} = \frac{75}{25} \times 100\% = 300\%$$

$$\begin{array}{l} \text{CP} = 100 \\ \text{CP} = 25 \\ \frac{75 \times 100}{25} \end{array}$$

Q3: If selling price is doubled, profit triples. Find the profit percent.

Let, SP is = TK 100

And profit = TK $\cdot x$

CP = $100 - x$

At \odot , SP = TK 200

profit = 3x

CP = $200 - 3x$

ATP, $200 - 3x = 100 - x$

$200 - 100 = 3x - x$

$\Rightarrow 2x = 100 \Rightarrow x = \underline{50}$

$$\text{profit} = \underline{\underline{50}}$$

$$\underline{\underline{CP}} = 100 - 50 = \underline{\underline{50}}$$

$$\underline{\underline{\text{profit}}} = \frac{50}{50} \times 100$$

$$= \underline{\underline{100\%}}$$

Q3: If selling price is doubled, profit triples. Find the profit percent.

$$\text{Let, } \text{CP} = 150$$
$$\text{profit} = x$$

$$\text{SP} = 100 + x$$

$$\text{SP} = 200 + 2x$$

$$\text{profit} = 3x$$

$$\text{CP} = 200 + 2x - 3x$$
$$= 200 - x$$

$$150 = 200 - x$$

$$x = 200 - 150 = 50$$

$$150$$

$$150\%$$

Q4: If the selling price of an article is $\frac{4}{3}$ of its cost price, then the profit percentage is- [BB AD 2016]

Let, CP is Tk. 3x

SP is Tk = 4x

profit = 4x - 3x = x

$$\% = \frac{x}{3x} \times 100 = \underline{\underline{33.33\%}}$$

If the selling price of an article is $\frac{3}{4}$ of its cost price, then the profit/loss percentage is-

$$CP = 4$$

$$SP = 3$$

$$\text{Loss} = 4 - 3 = 1$$

$$\text{Loss}\% = \frac{1}{4} \times 100 = 25\%$$

Type-2

Amount of Cost & Selling Price

Q5: Peter purchased a machine for Tk. 80,000 and spent Tk. 5000 on repair and Tk. 1000 on transport and sold it with 25% profit. At what price did he sell the machine? [BB Cash 16]

$$\text{CP of the machine} = 80000 + 5000 + 1000 \\ = \text{Tk. } 86000$$

$$\text{At 25\% profit, the SP is} = 125\% \text{ of } 86000 \\ = \frac{125}{100} \times 86000 \\ = \underline{107500}$$

Q6: By selling a book at TK. 600, Salim makes a profit of 25%. What was the cost of the book? [BGFCL-2021]

Let, the CP is = 100%.

At 25% profit, SP is = 125%

At Q,

$$\begin{aligned} 125\% \text{ of } \text{CP} &= 600 \\ \downarrow & \\ 100\% &= \frac{600}{125} \\ &= \frac{600 \times 100}{125} = \underline{480} \end{aligned}$$

$$\frac{\text{CP}}{100\%}$$

$$\text{SP}$$

$$125\%$$

$$600$$

$$125\% = 600$$

$$100\% = \boxed{\quad}$$

Q7: When a commodity is sold for Tk. 34.80, there is a loss of 20%.
What is the cost price of the commodity?

$$\frac{CP}{100\%}$$

$$\frac{SP}{80\%}$$

$$34.80$$

$$80\% = \frac{34.80}{80}$$

$$100\%$$

$$=$$

$$= \frac{34.80 \times 100}{80}$$

$$= \boxed{}$$

Q8: A man purchased a watch for Tk. 400 and sold it at a gain of 20% of the selling price. The selling price of the watch is-

CP

400

80%

[100% - 20%]

SP

100%

500

profit % of SP
20%

100

$$80\% = 400$$

$$1\% = \frac{400}{80}$$

$$100\% = \frac{400}{80} \times 100 = 500$$

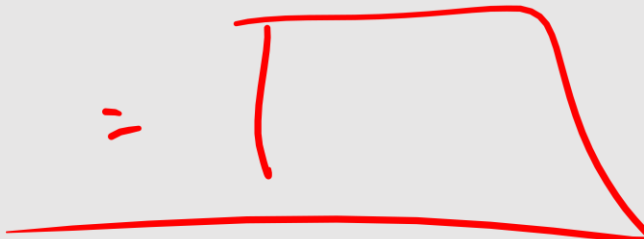
Q9: What will be the selling price of a table which costs Tk. 1,000 if it is sold at a profit of 20% on selling price?

Let, $SP = 100\%$.

profit % on $SP = 20\%$.

$\therefore CP = 100 - 20 = 80\%$.

At Q , $80\% = 1000$

$100\% =$ 

Type-3

Profit & loss Percentage on Numerical Product
(For equal Price)

Q10: The selling price of 15 items equals the cost of 20 items. What is the percentage profit earned by the seller? [BB AD 12, SEBL PO 16]

Let, the CP of 20 items Tk. 60 $\frac{20}{20}$
 " " " 1 " " $\frac{60}{20} = \underline{\underline{3}}$

$\frac{15}{15} \times 100$

So, The SP of 15 items = Tk. 60 $\frac{20}{15}$
 " " " 1 " " $= \frac{60}{15} = \underline{\underline{4}}$
20

$$\text{profit} = 4 - 3 = \underline{\underline{1}}$$

$$\text{profit \%} = \frac{1}{3} \times 100$$

$$= \textcircled{33.33\%}$$

$$\frac{\textcircled{20}}{\textcircled{60}} \times 100$$

$$\left[= \frac{5}{15} \times 100 \right]$$

Q11: The cost price of 19 articles is same as the selling price of 29 articles. What is loss percentage? [Combined 8 Banks SO 19]

(H.W)

Type-5

**Profit & loss Percentage on Numerical Product
(For unequal Price)**

Q12: A shopkeeper purchases 15 mangoes for Tk. 10 and sells them at 10 mangoes for Tk. 15. Thus, he earns a profit of- [Combined 5 Banks Cash '22 (2018 based)]

- Here, The CP of 15 mangoes is Tk 10

The SP of 10 mangoes is Tk. 15

$$\frac{\text{SP}}{\text{CP}} = \frac{15}{10}$$

$$\frac{15}{10} = \frac{15 \times 15}{10}$$

The 22.5

$$\text{Profit} = \underline{22.5} - 10 = \textcircled{12.5}$$

$$\text{Profit \%} = \frac{12.5}{10} \times \cancel{100}\%$$

$$= \underline{125\%}$$

Q13: Oranges are bought at 5 for Tk. 10 and sold at 6 for Tk. 15. The gain percent is-

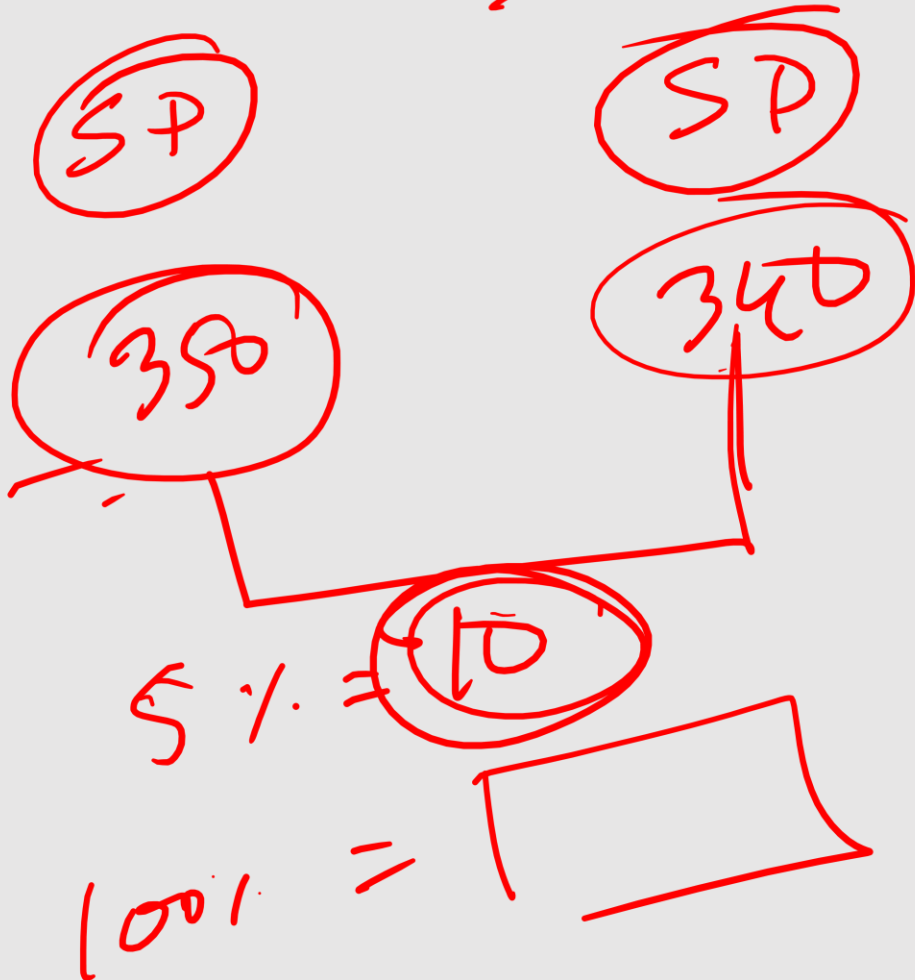
[Pubali JO 19]

(H.W)

Type-6

If Selling Price is more/less

Q14: If 5% more is gained by selling an article for Tk. 350 than by selling it for Tk. 340, the cost of the article is- [BDBL - (SO) -2017] & [Rupali Bank Off- (Cash)-2018]



Here, selling price difference = $350 - 340 = 10$

And, percentage = 5%

$$\therefore 5\% \text{ of } CP = 10$$

$$1\% - - - = \frac{10}{5}$$

$$\underline{\underline{100\% - - - = \frac{10 \times 100}{5} = 200}}$$

Q15: If a man reduces the selling price of a fan from Tk. 400 to Tk. 380, his loss increases by 2%. The cost price of the fan is-

(H.W)

Q16: A machine is sold at profit of 10%. Had it been sold for Tk. 40 less, there would have been a loss of 10%. What was the cost price?

SP at 10% profit

SP at 10% loss

CP

100%

110%

20%

90%

Let, CP = 100%

SP, at 10% p. = 110%

SP - 10% = 90%

At 10% profit,
 $110\% - 90\% = 20\%$
 $20\% = 40$

$$\begin{aligned} 20\% &= 40 \\ 1\% &= \frac{40}{20} \\ 100\% &= \frac{40 \times 100}{20} = 200 \end{aligned}$$

Type-7

**Selling price on particular profit or
loss percentage**

Q17: A person incurs a loss of 5% by selling a watch for Tk. 1140. At what price should the watch be sold to earn 5% profit? [Comb 5 Banks Cash 22 (2018 based)]

CP

SP at 5% loss

SP at 5% profit

105%

95%

And 95% of CP = 1140

∴

$$\frac{1140}{95}$$

105%

$$\frac{1140 \times 105}{95} = 1260$$

100%

$$95\% = \frac{1140 \times 100}{95}$$

Q18: Alam sold an item for Tk. 6384 and incurred a loss of 30%. At what price should he have sold the item to have gained a profit of 30%? [Comb 3 Banks Cash 18]

(H.W)

Q19: By selling a bicycle for Tk.2850, a shopkeeper gains 14%. If the profit is reduced to 8% then the selling price will be- [PKB-21]

reduced by 8%

$$14\% - 8\% = 6\%$$

$$114\% = 2850$$

$$1\% = \frac{2850}{114}$$

$$108\% = \frac{2850 \times 108}{114} = 2700$$

Thank You