

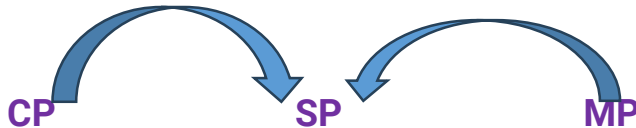


Name of the Bundle	PROFICIENT BUNDLE V2	Subject	APTITUDE
Topic	PROFIT AND LOSS	Last updated on	11 January 2024

## GENERAL FORMULAE

$$\text{GAIN \%} = \frac{\text{SP} - \text{CP}}{\text{CP}} \times 100\%$$

$$\text{LOSS \%} = \frac{\text{CP} - \text{SP}}{\text{CP}} \times 100\%$$



$$\text{CP} \times (100 + P) = \text{MP} \times (100 - D)$$

$$\text{CP}/\text{MP} = (100 - D)/(100 + P)$$

### Note:

- 1) Mark-up% is always calculated on the cost price.
- 2) Discount% is always calculated on the Marked price.
- 3) Profit or Loss % is always calculated on the Cost Price.
- 4) The money that is being spent on repairs, maintenance, transportation, Taxes such as GST etc., that must be **added to the Cost Price.**



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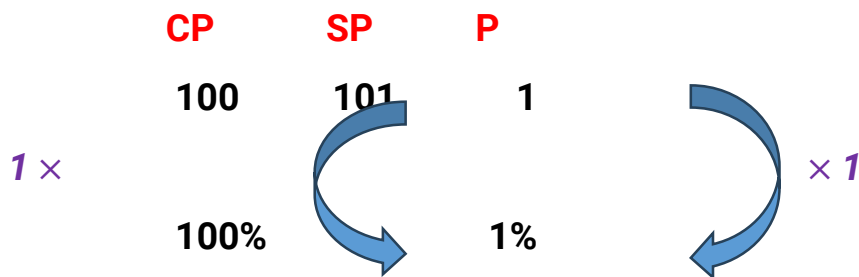
1) Find gain percent if C.P=100, S.P = 101.

- a) 1      b)2      c)3      d)-1

Ans: a) 1

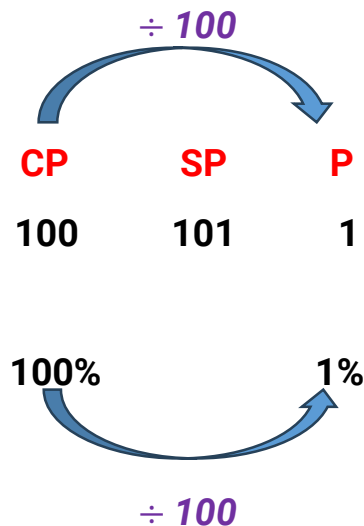
## SOLVING BY RATIO CONCEPT

### Method 1



### Method 2

#### BY COMPARING C.P AND PROFIT

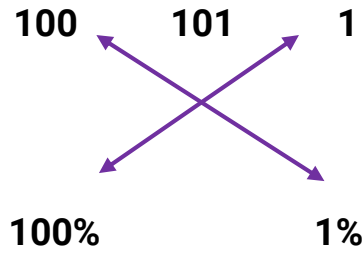




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### Method 3

#### BY CROSS MULTIPLICATION CP SP P

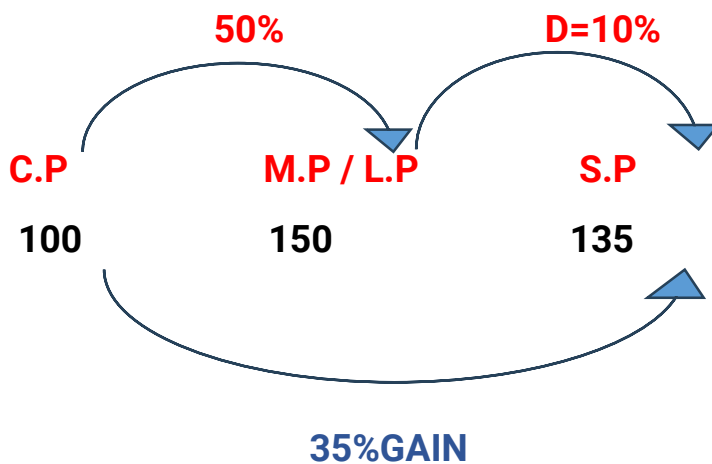


2) A merchant marks up the price by 50% and sells it at a discount of 10%. Then find the overall gain or loss.

- a) 20      b)25      c)35      d)40

Ans: c) 35

SOLUTION:





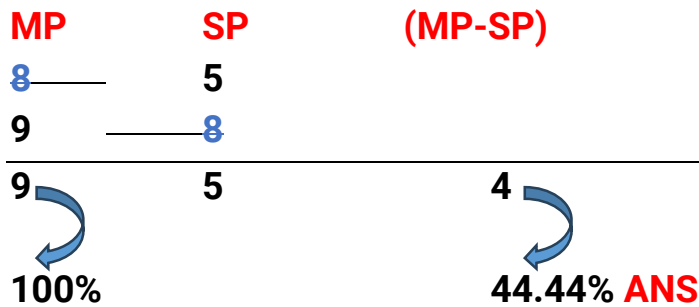
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3) Find the single discount equivalent to a discount series of 37.5% & 11 1/9%.

- a) 33.33%      b) 44.44%      c) 50%      d) 20%

**Ans: b) 44.44%**

**SOLUTION:**

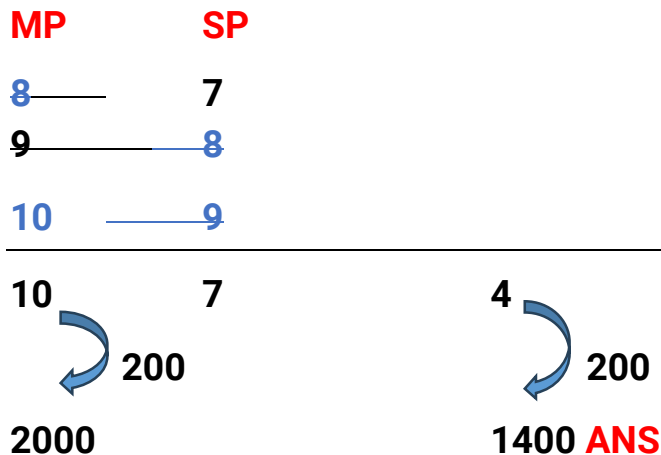


4) Find the S.P of the table. A table is marked up for Rs. 2000 with 3 successive discount of 11 1/9%, 12 1/2% & 10%

- a) 1000      b) 2000      c) 1400      d) 1500

**Ans: c) 1400**

**SOLUTION:**





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5) A Shopkeeper earns a profit of 12% on selling a book at 10% discount on the printed price. Find the ratio of CP to printed price of a book.

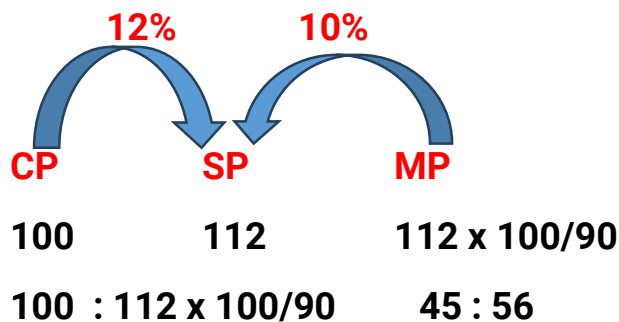
- a) 5: 12                      b) 45: 56                      c) 10: 9                      d) 6: 5

**Ans: b) 45: 56**

### Method 1

CP		MP
90	:	112
45	:	56

### Method 2





Name of the Bundle	PROFICIENT BUNDLE V2	Subject	APTITUDE
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6) A shopkeeper allows a discount of 4% to a custom. If gives 1 article free on purchase of every 15 articles and still earn 35% profit. Find the ratio of CP & MP.

- a) 5: 2                                      b) 4: 5                                      c) 1: 2                                      d)2: 3

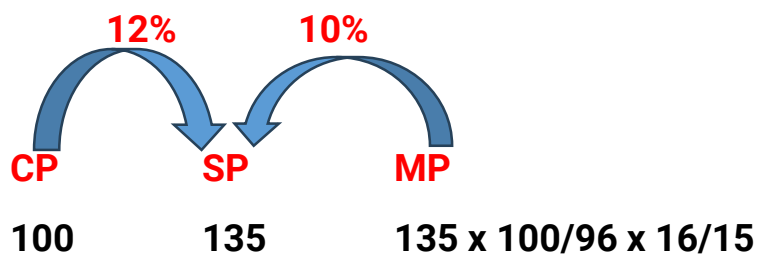
**Ans: d)2: 3**

### Method 1

$$\begin{array}{l} \text{CP} \qquad \qquad \text{MP} \\ 96 \quad : \quad 135 \\ \hline 16 \quad : \quad 15 \\ \hline 6 \quad : \quad 9 \end{array}$$

**Ans 2 : 3**

### Method 2



$$\begin{array}{l} 100 \quad : \quad 135 \times 100/96 \times 16/15 \\ 2 \quad : \quad 3 \end{array}$$

**Ans 2 : 3**



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7) A shopkeeper allows a discount of 20% to a custom. If gives 3 articles free on purchase of every 5 articles and still earn 25% profit. Find the ratio of CP & MP.

- a) 2 : 5                      b) 4 : 5                      c) 1 : 2                      d) 2 : 3

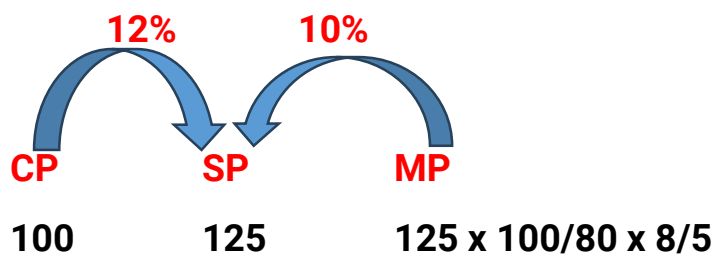
**Ans: a) 2 : 5**

### Method 1

$$\begin{array}{l} \text{CP} \qquad \qquad \text{MP} \\ 80 \quad : \quad 125 \\ \hline 8 \quad : \quad 5 \\ \hline 10 \quad : \quad 25 \end{array}$$

**Ans 2 : 5**

### Method 2



$$\begin{array}{l} 100 \quad : \quad 125 \times 100/80 \times 8/5 \\ 2 \quad : \quad 5 \end{array}$$

**Ans 2 : 5**



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8) The MP of an article is Rs. 744. After allowing x% discount, a shopkeeper still gains the same %. If no discount is allowed then the gain 14 2/7%.find CP of article.

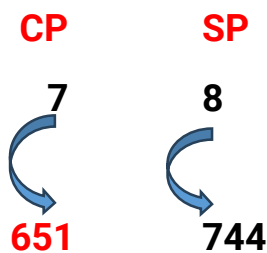
- a)500                      b)600                      c)651                      d) 700

**Ans: c) 651**

**SOLUTIONS:**

$$14 \frac{2}{7}\% = \frac{1}{7}$$

(MP = SP) -- No Discount means

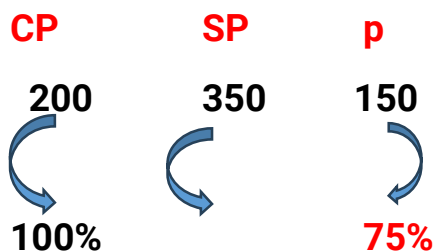


9) An article is purchased for Rs 200 and sold for Rs.350. The percentage gain will be

- a)50%                      b)25%                      c)100%                      d)75%

**Ans: d) 75%**

**Solutions:**







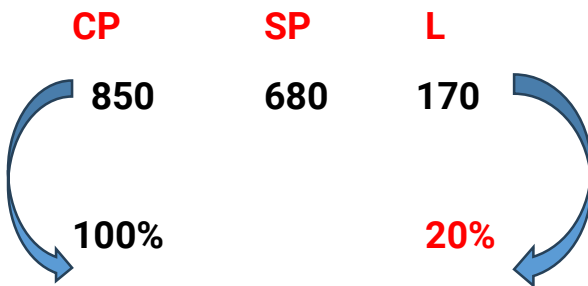
Name of the Bundle	PROFICIENT BUNDLE V2	Subject	APTITUDE
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10) Find percentage loss when cost price =Rs 850 and selling price =Rs 680.

- a)30%                      b)25%                      c)35%                      d)20%

**Ans: d)20%**

**Solutions:**

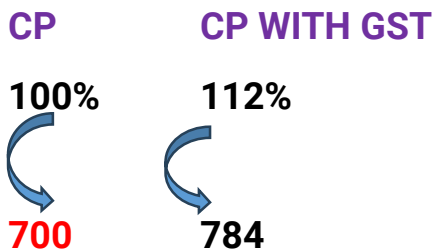


11) Salim bought an article for Rs 784 which included GST of 12%. What was the price of the article before GST was added?

- a)700                      b)650                      c)550                      d)600

**Ans: a)700**

**Solutions:**





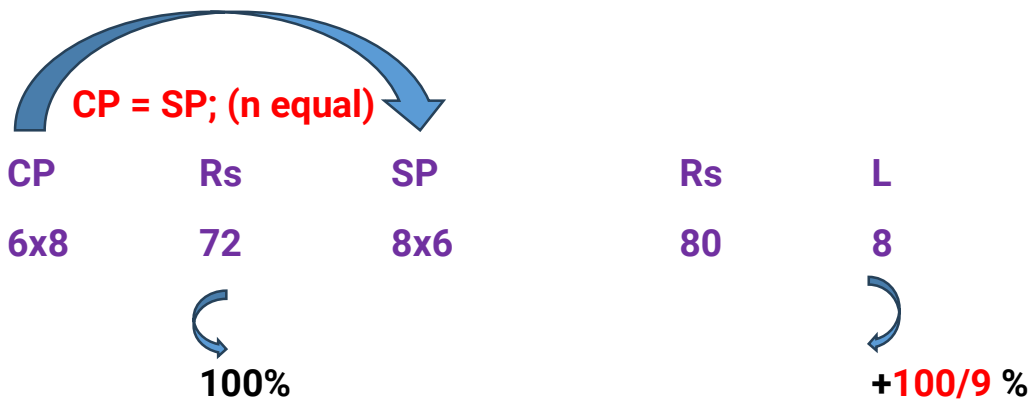
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Topic	PROFIT AND LOSS	Last updated on	11 January 2024

12) A vendor bought mangoes at the rate of 8 for Rs.12 and sold them at the rate of 6 for Rs.10. Find his percentage gain.

- a) 50%                      b)  $\frac{100}{9}$  %                      c) 10%                      d)  $\frac{100}{3}$  %

Ans: b)  $\frac{100}{9}$  %

Solutions:





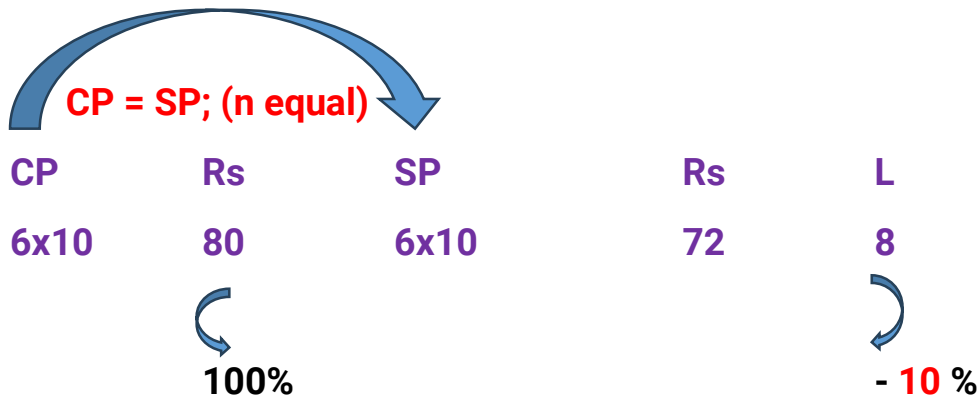
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Topic	PROFIT AND LOSS	Last updated on	11 January 2024

13) A vendor bought bananas at the rate of 6 for Rs. 10 and sold them at the rate of 4 for Rs. 6. What is the percentage loss?

- a) 20%                      b) 10%                      c) 90%                      d) 30%

Ans: b) 10%

Solutions:



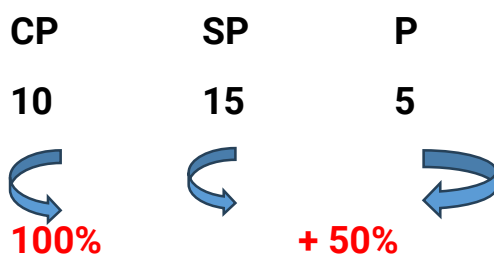
14) If the cost price of 15 shirts is equal to the selling price of 10 shirts, then what will be the gain or loss percent?

- a) 50% gain                      b)  $33\frac{1}{3}$ % gain                      c) 50% loss                      d)  $33\frac{1}{3}$ % loss

Ans: a) 50% gain

Solutions:

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





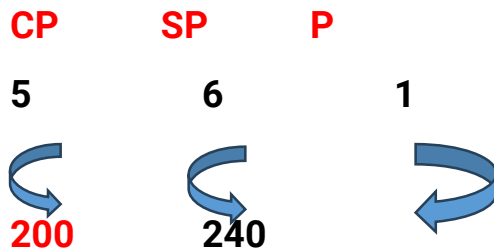
Name of the Bundle	PROFICIENT BUNDLE V2	Subject	APTITUDE
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15) An article is sold for Rs. 240. If the profit is one fifth of its cost price then the cost price is

- a) Rs.192      b) Rs.200      c) Rs.180      d) Rs.164

**Ans: b) Rs.200**

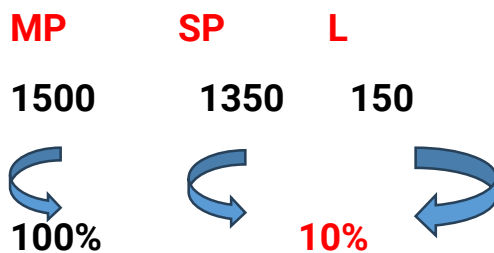
**Solutions:**



16) A bicycle marked at 1,500 is sold for 1,350. What is the percentage of discount?

- a) 20%      b) 18%      c) 15%      d) 10%

**Ans: d) 10%**



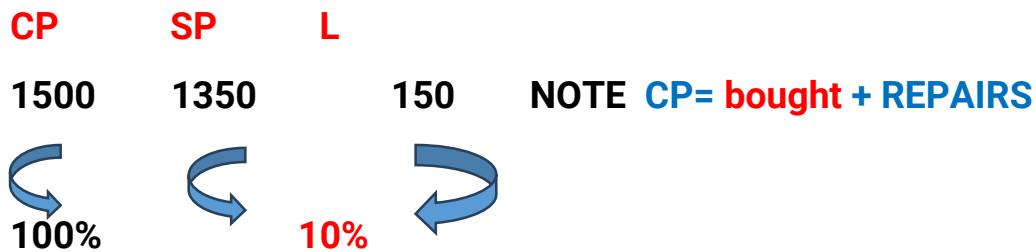


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17) A man bought a bicycle for rs.1250. He spent Rs.250 on its repairs. He then sold it for rs.1350. Find his gain or loss percentage

- a) 30%                      b) 12%                      c) 20%                      d)10%

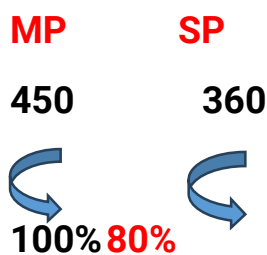
Ans: d)10%



18) By selling a book for Rs. 360, 20% discount was given. What is the marked price of the book?

- a) Rs.450                      b) Rs.420                      c) Rs.400                      d) Rs.480

Ans: a) Rs.450





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19) A man sells two wrist watches at 594 each. On one he gains 10% and on the other he loses 10%. Find his gain or loss percent on the whole.

- a) 1% gain      b) 1% loss      c) 2% gain      d) 2% loss

**Ans: b) 1% loss**

### METHOD 1

$$110/100 \times 90/100$$

$$= 99/100$$

$$= 1\% \text{ LOSS}$$

### METHOD 2

$$= +10 - 10 + 10 \times -10/100$$

$$= -1$$

20) A bought a horse of Rs. 10,000 and sold it to B at 10% profit and B sold it to C at 10% loss. Find the cost price of C

- a) Rs.10000      b) Rs.9900      c) Rs.9999      d) Rs.11000

**Ans: b) Rs.9900**

### METHOD 1

$$= +10 - 10 + 10 \times -10/100$$

$$= 1\% \text{ LOSS}$$

$$100\% ===== 10000$$

$$99\% ===== 9900$$

**Rs.9900**



Name of the Bundle	PROFICIENT BUNDLE V2	Subject	APTITUDE
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21) A television set was sold for Rs.14,400 after giving successive discounts of 10% and 20% respectively. What was the marked price?

- a) Rs.18,000                      b) Rs.20,000      c) Rs.22,000                      d) Rs.19,000

**Ans: b) Rs.20,000**

### METHOD1

$$= -20-10 \text{ (-20 x -10/100)}$$

$$=-28\%$$

$$100-28 = 72\%$$

72%



14400

100%

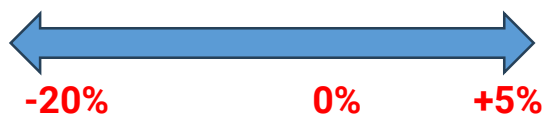


20000

22) A shopkeeper sold an article at a 20% loss. If he could sell 100 more, his profit would have been 5%. Find the cost price?

- a) Rs.600                      b) Rs.520                      c) Rs.450                      d) Rs.400

**Ans: d) Rs.400**



25%-----⊠ 100

100%-----⊠ 400

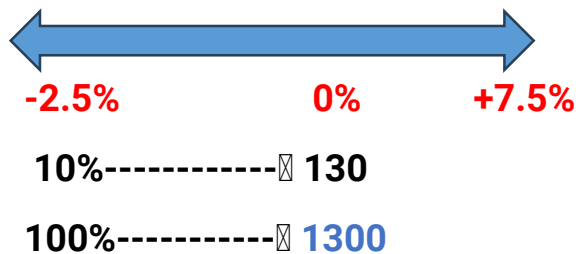


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23) A dealer sold a radius at a loss of 2.5%. Had he sold it for Rs 130 more he would have gained 7.5%. Find the CP of the article

- a) 1000                      b) 1100                      c) 1200                      d) 1300

**Ans: d) 1300**

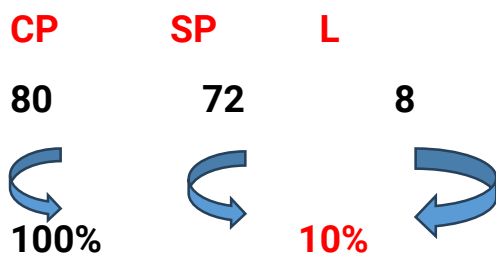


24) After selling 72 articles a man suffers a loss of SP of 8 articles. Find his loss %

- a) 10%                      b)  $11 \frac{1}{9}\%$                       c) 12.5%                      d)  $14 \frac{2}{7}\%$

**Ans: a) 10%**

**Solution:**







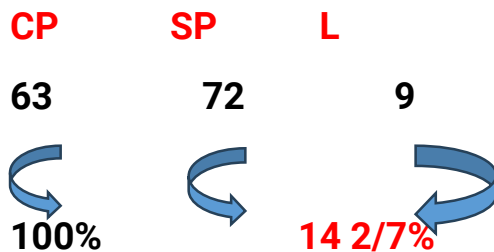
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25) After selling 72 articles a man suffers a profit of SP of 9 articles. Find his loss %

- a) 10%                      b)  $11 \frac{1}{9}\%$                       c) 12.5%                      d)  $14 \frac{2}{7}\%$

Ans: d)  $14 \frac{2}{7}\%$

Solution:



26) A man sell 2 horses at the rate of Rs, 1995 lakh each on one he gains 5% & on the other the losses 5%. Find his profit or loss % in the whole transactions

- a) no loss no gain    b) 0.25% loss    c) 12.5% profit    d) 0.25% profit

Ans: b) 0.25% loss

**METHOD1**

$$= +5 -5 +5 \times -5/100$$

$$= 0.25\% \text{ Loss}$$



Name of the Bundle	PROFICIENT BUNDLE V2	Subject	APTITUDE
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27) A man bought 2 horses at the rate of Rs, 1995 lakh each on one he gains 5% & on the other the losses 5%. Find his profit or loss % in the whole transaction.

- a) no loss no gain
- b) 0.25% loss
- c) 12.5% profit
- d) 0.25% profit

**Ans: a) no loss no gain**

**If Cost price of two articles is the same and the percentage of loss and gain is same, then there will be no loss or no gain.**

28) 2 chairs and 1 table cost Rs. 880, while 1 chair and 2 table cost Rs .980. find the cost of each.

- a)Rs. 280 and 380
- b)Rs. 185 and 285
- c)Rs. 260 and 360
- d)Rs. 195 and 295

**Ans: c)Rs. 260 and 360**

**Solution:**

let the price of each chair =x

price of each table=y

$$2x + y = 880$$

$$x + 2y = 880$$

$$y-x=100$$

$$880-100=780/3 =260$$

$$Y=260+100=360$$

$$X=260$$



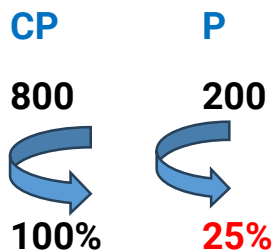
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Topic	PROFIT AND LOSS	Last updated on	11 January 2024

29) A shopkeeper promises to sell his good at cost price but uses 800gm weight for 1kg. find the profit.

- a) 10%                      b) 20%                      c) 25%                      d) 50%

Ans: c) 25%

**SOLUTION:**



30) A shopkeeper sells rice at a profit of 25% but uses weights which are 20% less than market weight. Find the profit earned by him

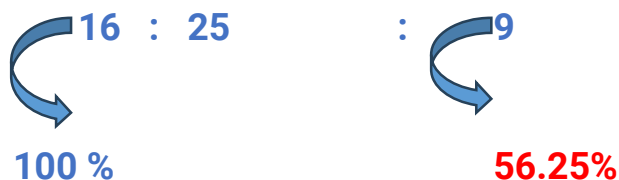
- a) 56.25%                      b) 50%                      c) 75%                      d) 37.5%

Ans: a) 56.25%

**SOLUTION:**

Profit ----- 4    5

Weight ----- 4    5





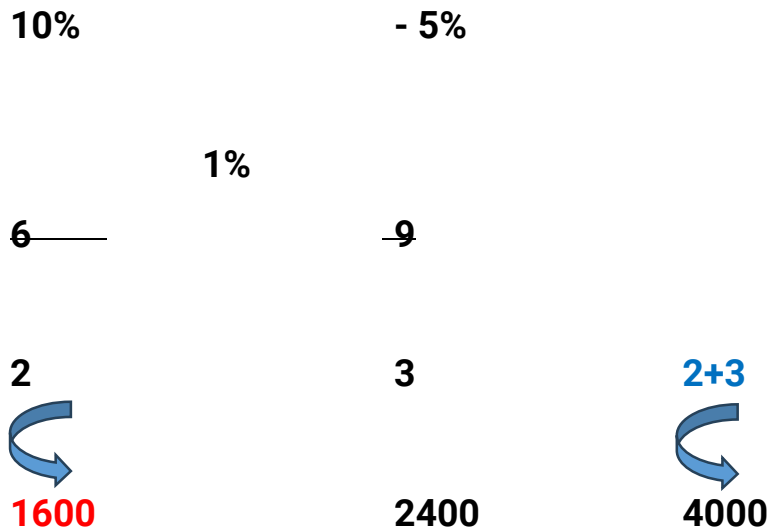
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31) A man bought a horse and a cow for Rs.4000. He sold the horse at a gain of 10% & the cow at a loss of 5%. If the gain 1% on the whole transaction the find the cost price of horse.

- a)2400                      b)2000                      c)3000                      d)1600

**Ans: d)1600**

**SOLUTION:**





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32) A man sold a book at 30% profit & a pen at 40% profit. If he sold the book at 40% profit and the pen at 30% profit. he gain Rs 800 more. find the difference in cp of book and pen

- a) 4000                      b) 6000                      c) 8000                      d) 5000

**Ans: c) 8000**

**SOLUTION:**

$$(40-30)\% \text{-----} \quad 10\% = 800$$

$$100\% = 8000$$

33) A man sold a book at 13% profit & a pen at 17% profit. If he sold the book at 17% profit and the pen at 13% profit. he gain Rs 80 more. find their individual cost prize if he purchased book and pen for Rs 25000

- a) 11500 & 13500    b) 13500 & 11500  
c) 12500 & 12500    d) 17000 & 13000

**Ans: a) 11500 & 13500**

**SOLUTION:**

$$B + P = 25000 \quad (17-13)\% \text{-----} \quad 4\% = 80$$

$$B - P = 2000 \quad 100\% = 2000$$

$$2P = 23000$$

**P = 11500 & B = 13500**



# Selvam College of Technology



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34) On selling a chair at 5% loss and a table at 15% gain, a man gains Rs. 300. If he sells the chair at 5% gain and the table at 5% gain, then he gains Rs. 180. The actual cost of the table is

- a) 4000                      b) 2400                      c) 8000                      d) 5000

**Ans: b) 2400**

**Chair**

**Table**

$$5L \qquad 15 G \qquad = 300$$

$$5G \qquad 5\% G \qquad = 180$$

$$20 \% \text{ Table} \qquad = 480$$

$$100\% \qquad = \mathbf{2400}$$