1. 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:

एक दुकानदार मुद्रित मूल्य पर 10% छूट पर एक किताब बेचने पर 12% का लाभ कमाता है। पुस्तक के लागत मूल्य और मुद्रित मूल्य का अनुपात है:

A. 45 : 56

B. 45 : 51

C. 47 : 56

D. 47 : 51

Answer: Option A

Solution: Let the CP be 100

Hence, SP=100+12% of 100

=112

If the marked price be X,

then 90% of X=112

$\Rightarrow x=\frac{112\times100}{90}$

⇒x=Rs.11209

Hence, Required ratio=100:$\frac{1120}{9}$=900:1120=45:56

2. By selling a bicycle for Rs. 2,850, a shopkeeper gains 14%. If the profit is reduced to 8%, then the selling price will be:

एक साइकिल को रुपये में बेचकर। 2,850 पर एक दुकानदार को 14% का लाभ होता है। यदि लाभ घटाकर 8% कर दिया जाए, तो विक्रय मूल्य होगा:

A. Rs. 2600

B. Rs. 2700

C. Rs. 2800

D. Rs. 3000

Answer: Option B

Solution: Let Cost Price was X.

X + 14% of X = 2850

X + $\frac{14X}{100}$ = 2850

X + 0.14X = 2850

1.14X = 2850

X = 2500.

So, Cost Price = Rs. 2500.

Now, Selling Price When profit remains at 8%,

= 2500 + 8% of 2500

= Rs. 2700.

Short-Cut

CP of bicycle = $\frac{100}{114}$× 2850 = Rs. 2500

SP for a profit of 8% = $\frac{108}{100}$× 2500 = Rs. 2700

3. A sells an article to B at a profit of 10% B sells the article back to A at a loss of 10%. In this transaction: A

एक वस्तु B को 10% के लाभ पर बेचता है B वह वस्तु A को 10% की हानि पर वापस बेचता है। इस लेन-देन में:

A. A neither losses nor gains

B. A makes a profit of 11%

C. A makes a profit of 20%

D. B loses 20%

Answer: Option B

Solution: First Method

Let CP was 100 for A originally

A sells article to B at 10% profit,

CP for B = 100 + 10% of 100 = 110

Now, B sells it A again with loss 10%

Now, CP for A this time = 110 - 10% of 110 = 99

A makes Profit = 110 - 99 = 11

% profit for A = $\frac{11\times100}{100}$

= 11%

Second Method

It could be easily shown by net percentage change graphic.

100(A) == 10%(Profit) ⇒110(B) == 10%(Loss) ⇒ 99(A)

In this transaction A makes a profit of (110 - 99 = 11%) 11%

[10% on selling to B and 1% profit on buying back from B]

4. A person sold a horse at a gain of 15%. Had he bought it for 25% less and sold it for Rs. 600 less, he would have made a profit of 32%. The cost price of the horse was:

एक व्यक्ति ने एक घोड़ा 15% लाभ पर बेचा। यदि उसने इसे 25% कम पर खरीदा होता और इसे रु. 600 रुपये कम करने पर उसे 32% का लाभ होता। घोड़े का लागत मूल्य था:

A. Rs. 3,750

B. Rs. 3,250

C. Rs. 2,750

D. Rs. 2,250

Answer: Option A

Solution: Let the original CP =Rs.X Hence,

SP=X+15%of X=$\frac{115X}{100}$ =Rs.$\frac{23x}{20}$

New CP=x−25% of X=$\frac{75\,x}{100}$ =$\frac{3x}{4}$

New SP =$\frac{3\,x}{4}$+ 32% of $\frac{3x}{4}$=Rs.99 x100 According to the question ,$\frac{23x}{20}$ − $\frac{99x}{100}$=600

Or,$\frac{115x-99x}{100}$=600

16x=600×100X=600$\frac{100}{16}$=Rs.3750

5. If a man were to sell his chair for Rs. 720, he would lose 25%. To gain 25% he should sell it for:

यदि कोई व्यक्ति अपनी कुर्सी 100 रुपये में बेचता है। 720, उसे 25% का नुकसान होगा। 25% लाभ प्राप्त करने के लिए उसे इसे बेचना चाहिए:

A. Rs. 1,200

B. Rs. 1,000

C. Rs. 960

D. Rs. 900

Answer: Option A

Solution: Let the Cost price of the Chair is X.

SP = X - 25% of X

720 = 0.75X

X = 960

CP = Rs. 960

So, To gain 25%, SP would be

= 960 + 25% of 960 =Rs. 1200

Short-cut

CP of chair =$\frac{100}{75}$× 720 = Rs. 960

To gain 25%, SP =$\frac{125}{100}$× 960 = Rs. 1200

6. A man sold two chairs at Rs. 1200 each. On one he gained 20% and on the other he loss 20%. His gain or loss in the whole transaction is:

एक आदमी ने दो कुर्सियाँ रुपये में बेचीं। 1200 प्रत्येक. एक पर उसे 20% का लाभ हुआ और दूसरे पर उसे 20% की हानि हुई। पूरे लेन-देन में उसका लाभ या हानि है:

A. 1% loss

B. 2% loss

C. 4% loss

D. 15 gain

Answer: Option C

Solution:In the case where loss and gain percentage is common on same selling price, always a loss incurs in total deal. And this can be calculated by a short-cut:

Loss on total deal,

$= (\frac{Common\ loss\ or\ gain\ percentage}{10})^2 = (\frac{20}{10})^2 = 4\%$

Alternatively, It can be also calculated through Graphic Change Method: This can be given by,

100 == 20% gain ⇒ 120 == 20% loss ⇒ 96

Loss = 4% (As 100 became 96)

7. A shopkeeper marks his goods 30% above his cost price but allows a discount of 10% at the time of sale. His gain is:

एक दुकानदार अपने सामान पर लागत मूल्य से 30% अधिक मूल्य अंकित करता है लेकिन बिक्री के समय 10% की छूट देता है। उसका लाभ है:

A. 21%

B. 20%

C. 18%

D.17%

Answer: Option D

Solution:Let the cost price be Rs. 100

then the mark up price which is 30% above the cost price,

Mark price = (100 + 30% of 100) = Rs. 130

Shopkeeper gives a discount of 10% on mark up price, then the

Selling Price = (130 - 10% of 130) = Rs. 117

Gain = 117 - 100 = Rs. 17% gain$=\frac{17\times100}{100}$=17%

Short Cut method:

100(CP) == 30%↑ ⇒ 130(MP) == 10%↓ ⇒ 117(SP)

Gain = 17%

8.If the profit per cent got on selling an article is numerically equal to its cost price in rupees and the selling price is Rs. 39, then cost price (in Rs.) will be:

यदि किसी वस्तु को बेचने पर प्राप्त लाभ प्रतिशत संख्यात्मक रूप से उसकी लागत मूल्य रुपये में बराबर है और विक्रय मूल्य रुपये है। 39, तो लागत मूल्य (रुपये में) होगा:

A.20

B.22

C.28

D.30

Answer: Option D

Solution: SP = Rs. 39

CP = x (let)

Profit % = CP

or,$\frac{39-x}{x\times100}$=x

[% profit=$\frac{SP-CP}{CP}$]

$3900-100x=x^2$

$x^2+100-3900=0$

x=30 (we cannot take negative value of x)

9. A man buys a field of agricultural land for Rs. 3,60,000. He sells one-third at a loss of 20% and two-fifths at a gain of 25%. At what price must he sell the remaining field so as to make an overall profit of 10%?एक आदमी कृषि भूमि का एक खेत रुपये में खरीदता है। 3,60,000. वह एक तिहाई को 20% की हानि पर और दो-पांचवें को 25% के लाभ पर बेचता है। 10% का कुल लाभ कमाने के लिए उसे शेष खेत को किस कीमत पर बेचना चाहिए?

A. Rs.1, 00,000

B. Rs. 1,15,000

C. Rs. 1,20,000

D. Rs. 1,25,000

Answer: Option

10. An article is listed at Rs. 920. A customer pays Rs. 742.90 for it after getting two successive discounts. If the rate of first discount is 15%, the rate of 2nd discount is:

Answer: Option C

Solution:

First Method :

$CP = 360000$

To gain 10% on whole land,

$SP = 360000 + 10\% \text{ of } 360000$

$= Rs.\ 396000$

$\frac{1}{3}$ of the land sold on 20% loss.

SP of $\frac{1}{3}$ land

$= \frac{360000}{3} - 20\% \text{ of } \frac{360000}{3}$

$= Rs.\ 96000$

SP of $\frac{2}{5}$ of the land

$= \frac{360000 \times 2}{5} + 25\% \text{ of } \frac{360000 \times 2}{5}$

$= Rs.\ 180000$

Thus,

SP of the remaining land

$= 396000 - 96000 - 180000$

$= Rs.\ 120000$

Second Method:

SP of total agricultural field at a profit of

$10\% = \frac{360000 \times 110)}{100}$

$= Rs.\ 396000$

So, SP of $\frac{1}{3}$ of field

$= \frac{360000}{3} \times \frac{80}{100}$

$= Rs.\ 96000$

SP of $\frac{2}{5}th$ of the field

$= \frac{2 \times 360000 \times 125}{5 \times 100}$

$= Rs.\ 180000$

Hence,

SP of the remaining field

$= Rs.\ (396000 - 96000 - 180000)$

$= Rs.\ 120000$

एक वस्तु रुपये में सूचीबद्ध है। 920. एक ग्राहक रुपये का भुगतान करता है। लगातार दो डिस्काउंट मिलने के बाद इसकी कीमत 742.90 रुपये है। यदि पहली छूट की दर 15% है, तो दूसरी छूट की दर है:

A.3%

B.5%

C.8%

D.12%

Answer: Option B

Solution:MP = 920

After first discount marked Price (MP) become,

= 920 - 15% of 920 = 782

The Selling Price (SP) = 742.90

Let second discount was x% on 782

782 - x% of 782 = 742.90

$\frac{782x}{100}$= 39.1

782x = 3910

x = 5%

Second Discount = 5%

Short-Cut

920 == 15 % (1st discount)) == 782 == x%↓(2nd discount) ⇒ 742.90

Then, x%=$\frac{(782-742.90)\times100}{742.90}$=$\frac{39.1\times100}{742.90}$=5%

11. A tradesman marks his goods at 25% above the cost price and allows purchasers a discount of 252 %, his profit is:

एक व्यापारी अपने माल पर लागत मूल्य से 25% अधिक मूल्य अंकित करता है और खरीददारों को छूट देता है

A. 8%

B. 8.5%

C. 8.625%

D. 9.375%

Answer: Option D

Solution:Let his CP = Rs. 100.

Marked Price = 100 + 25% of 100 = 125.

Now, discount =$\frac{25}{2}$

% on MP So, SP = 125 -$\frac{25}{2}$

% of 125 = Rs. 109.375.

%Gain = 9.375%.

Alternatively use graphic change method:

100(CP) == 25% Up ⇒ 125(MP) == 12.5%down ⇒ 109.375

% Profit = 9.375%

12. A bicycle marked at Rs. 2,000, is sold with two successive discount of 20% and 10%.An additional discount of 5% is offered for cash payment. The selling price of the bicycle at cash payment is:

एक साइकिल पर अंकित मूल्य रु. 2,000, 20% और 10% की दो क्रमिक छूट के साथ बेचा जाता है। नकद भुगतान के लिए 5% की अतिरिक्त छूट की पेशकश की जाती है। नकद भुगतान पर साइकिल का विक्रय मूल्य है:

A. Rs. 1,368

B. Rs. 1,468

C. Rs. 1,568

D. Rs. 1,668

Answer: Option A

Solution:

Marked Price = 2000

SP after first Discount of 20% = 2000 - 20% of 2000 = 1600

SP after second Discount of 10% = 1600 - 10% of 1600 = 1440

Now, the final selling price at cash = 1440 - 5% of 1440 = Rs. 1368

Shortcut by using Graphic Change 2000(MP) == 20% (disc.) ⇒ 1600 == 10% (disc.) ⇒ 1440 == 5% (disc.) ⇒ 1368(SP)

13. The marked price of a shirt and trousers are in the ratio 1:2. The shopkeeper gives 40% discount on the shirt. If the total discount in the set of the shirt and trousers is 30%, the discount offered on the trousers is:

एक शर्ट और पतलून का अंकित मूल्य 1:2 के अनुपात में है। दुकानदार शर्ट पर 40% की छूट देता है। यदि शर्ट और पतलून के सेट पर कुल छूट 30% है, तो पतलून पर दी जाने वाली छूट है:

A. 15%

B. 20%

C. 25%

D. 30%

Answer: Option C

Solution:Let the price of shirt and trouser be Rs. 100 and Rs. 200 respectively.

Then, price of set of shirt and trouser = Rs. 300.

After giving 30% discount on the set,

Selling Price = 300 - 30% of 300 = 210.

Total Discount on Set = 90.

And Discount on shirt is 20% alone,

SP of shirt alone = 100 - 40% of 100 = 60.

Rs. 40 is the discount on shirt then Rs. 50 must be the discount on the trouser.

So, discount on trouser $=\frac{50\times100}{200}$

= 25%.

14. A dealer buys an article marked at Rs. 25,000 with 20% and 5% off. He spends Rs. 1,000 for its repairs and sells it for Rs. 25,000. What is his gain or loss per cent?

एक डीलर रुपये अंकित मूल्य वाली एक वस्तु खरीदता है। 20% और 5% छूट के साथ 25,000। वह रुपये खर्च करता है. इसकी मरम्मत के लिए 1,000 रुपये खर्च करता है और इसे रुपये में बेचता है। 25,000. उसका लाभ या हानि प्रतिशत क्या है

A. loss of 25%

B. gain of 25%

C. gain 10%

D. loss of 10%

Answer: Option B

Solution: Marked Price = 25000.

After first discount it become,

= 25000 - 20% of 25000 = 20000.

After second discount, it becomes

= 20000 - 5% of 20000 = 19000.

So, SP = 19000.

CP for the man who bought it, as he spends 1000 on repair.

= 19000 + 1000 = 20000

Profit = 25000 - 20000 = 5000.

%Profit $=\frac{5000\times100}{20000}$

= 25%

Short-Cut

25000(MP) == 20%(Disc.) ⇒ 20000 == 5%(disc.) ⇒19000(CP)

Spends on repair = Rs. 1000

Then, CP becomes = 19000 + 1000 = 20000

Profit = 5000

% profit $=\frac{5000\times100}{20000}$ = 25%

15. A trader sells his goods at a discount 20%. He still makes a profit of 25%. If he sells the goods at the marked price only, his profit will be:

एक व्यापारी अपना माल 20% छूट पर बेचता है। वह अभी भी 25% का लाभ कमाता है। यदि वह अंकित मूल्य पर ही माल बेचता है, तो उसका लाभ होगा:

A. 56.25%

B. 25.56%

C. 50.25%

D. 54.25%

Answer: Option A

Solution: Let the marked price = Rs. 100

Then, SP = 100 - 20% of 100 = Rs. 80

Profit = 25%

Let His CP = X

SP = 80

X + 25% of X = 80

Hence, X = Rs.$\frac{100\times80}{125}$

= Rs. 64

CP = Rs. 64

Profit after selling on marked price = 100 - 64 = Rs. 36

% gain =$\frac{36\times100}{64}$

= 56.25%

16. The marked price of a radio is 20% more than its cost price. If a discount of 10% is given on the marked price, the gain per cent is:

एक रेडियो का अंकित मूल्य उसके लागत मूल्य से 20% अधिक है। यदि अंकित मूल्य पर 10% की छूट दी जाती है, तो लाभ प्रतिशत है:

A.15

B.12

C.10

D.8

Answer: Option D

Solution: Let CP = 100

Then, MP = 100 + 20% of 100 = 120

Now, SP = 120 - 10% of 120 = 108

Gain = 108 - 100 = 8

%Gain = $\frac{8\times100}{100}$

= 8%

Short-cut

100 (CP) == 20 % (up) ⇒ 120(MP) == 10 % (disc.) ⇒ 108

% gain = 8%

17. A shopkeeper sells sugar in such a way that the selling price of 950g of sugar is the same s the cost price of 1 kg of sugar. What is his gain percent?

एक दुकानदार चीनी इस प्रकार बेचता है कि 950 ग्राम चीनी का विक्रय मूल्य 1 किलोग्राम चीनी के लागत मूल्य के समान है। उसका लाभ प्रतिशत क्या है?

A.$5\frac{5}{19}$%

B.$5\frac{1}{5}$%

C. 5 %

D.$4\frac{1}{19}$%

Answer: Option A

Solution: Sell sugar =950 g instead of 1000 g

Profit in sugar

=1000−950=50g

Now,% profit=$\frac{50\times100}{950}$=$5\frac{5}{19}$%

Short - cut:

%profit=$\frac{Goods\ left}{\text{Goods sold}}$×100=$\frac{50}{950}$×100=$5\frac{5}{19}$%

18. 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 on his goods?

11.11% की छूट देने के बाद भी, एक व्यापारी को 14.28% का लाभ होता है। वह अपने माल पर लागत मूल्य से कितने प्रतिशत अधिक मूल्य अंकित करता है?

A. 28.56%

B. 35%

C. 22.22%

D. None of these

Answer: Option A

Solution:Let the CP be Rs. 100, then SP = 100 + 14.28% of 100 = Rs. 114.28

(As Profit = 14.28%)

This profit is arrived after giving discount of 11.11% on the marked price.

Let the marked price be x

X - 11.11% of X = 114.28

$X \times \frac{100-11.11}{100} = 114.28$

$X = \frac{114.28 \times 100}{8889}$

= Rs. 128.56, which is more than 28.56% of CP.

19. A dealer buys dry fruits at Rs. 100, Rs. 80, and Rs. 60 per kilogram. He mixes them in the ratio 3:4:5 by weight and sells at a profit of 50%. At what price per kilogram does he sell the dry fruits?

एक डीलर सूखे मेवे रुपये में खरीदता है। 100, रु. 80, और रु. 60 प्रति किलोग्राम. वह उन्हें वजन के हिसाब से 3:4:5 के अनुपात में मिलाता है और 50% के लाभ पर बेचता है। वह प्रति किलोग्राम किस कीमत पर सूखे मेवे बेचता है?

A. Rs. 80

B. Rs. 100

C. Rs. 95

D. None of these

Answer: Option D

Solution:Let the dealer buys 3 kg, 4 kg and 5 kg.

Price of total dry fruits = 3 × 100 + 4 × 80 + 5 × 60 = Rs. 920

SP = 920 + 50% of 920 = 1380

Hence,Price of mix dry fruits per kg $=\frac{1380}{12}$

= Rs. 115

20. The cost price of an article is 80% of its marked price for sale. How much per cent does the tradesman gain after allowing a discount of 12%?

एक वस्तु का लागत मूल्य बिक्री के लिए अंकित मूल्य का 80% है। 12% की छूट देने के बाद व्यापारी को कितना प्रतिशत लाभ होता है?

A. 20%

B. 12%

C. 10%

D. 8%

Answer: Option C

Solution:Let the marked price = Rs. 100

Then the cost price = 80% of 100 = Rs. 80

After allowing 12% discount on MP,

SP become = Rs. 88.

% profit $=\frac{8\times100}{80}$

= 10%

21. A merchant has announced 25% rebate on prices of ready-made garments at the time of sale. If a purchaser needs to have a rebate of Rs. 400, then how many shirts, each costing Rs. 320, should he purchase?

एक व्यापारी ने बिक्री के समय तैयार कपड़ों की कीमतों पर 25% छूट की घोषणा की है। यदि किसी खरीदार को रुपये की छूट की आवश्यकता है। 400 है, तो कितनी शर्टें, प्रत्येक की कीमत रु. 320, क्या उसे खरीदना चाहिए?

A. 10
B. 7

C. 6
D. 5
Answer: Option D

Solution:Discount on one shirt,= 25% of 320

$=\frac{320\times25}{100}$

= Rs. 80

Hence, number of shirt he must buy to get a rebate of Rs. 400 $=\frac{400}{80}$ = 5

22. A reduction of 10% in the price of tea enables a dealer to purchase 25 kg more tea for Rs. 22500. What is the reduced price per kg of tea?

चाय की कीमत में 10% की कमी से एक डीलर 25 रुपये में 25 किलो अधिक चाय खरीद सकता है। 22500. प्रति किलोग्राम चाय की घटी हुई कीमत क्या है?

A. Rs. 70

B. Rs. 80

C. Rs. 90

D. Rs. 100

Answer: Option C

Solution: 1st Method :Let the original prine of tea be Rs.x kg

After reduction the price becomes=x−10% of x

=9x/10 per kg Now, 22500/$\frac{9x}{10}-\frac{22500}{x}$ =25 or,

22500[$\frac{10}{9x}-\frac{1}{x}$]=25

or,25×9x=22500or,x=$\frac{22500}{25\times9}$

=Rs.100

Hence,newprice=90perkg

Thought process method :

Let the original price be Rs. 100 per kg, He get tea=22500100=225kgAfter reduction the price becomes= 90 per kg He get tea=2250090=250kgSo, reduction price is Rs. 90 per kg

As it enables him to buy 25 kg of more tea.

23. A sells an article to B at gain of 25% B sells it to C at a gain of 20% and C sells it to D at a gain 10%. If D pays Rs. 330 for it, how much did it cost to A?

A एक वस्तु को B को 25% के लाभ पर बेचता है B इसे C को 20% के लाभ पर बेचता है और C इसे D को 10% के लाभ पर बेचता है। यदि D रुपये का भुगतान करता है। इसके लिए 330 रु., A को इसकी लागत कितनी होगी?

A. Rs. 200

B. Rs. 250

C. Rs. 275

D. Rs. 290

Answer: Option A

Solution: First Method

Let Cost Price for A was 100

Then CP for B = 100 + 25% of 100 = 125

CP for C = 125 + 20% of 125 = 150

CP for D = 150 + 10% of 150 = 165

But, D pay Rs. 330, Then it must be equal to

165 = 330

$1 = \frac{330}{165}$

$100 = \frac{330 \times 100}{165} = 200$

Thus, CP for A = Rs. 200

Short-cut

A's CP =

$330 \times \frac{100}{125} \times \frac{100}{120} \times \frac{100}{110}$ = Rs. 200

24. I sold two watches for Rs. 300 each, one at loss of 20% and other at the profit of 20%. What is the percentage of loss (-) or profit (+) that resulted from the transaction?

मैंने दो घड़ियाँ रुपये में बेचीं। प्रत्येक 300 रुपये का है, एक 20% की हानि पर और दूसरा 20% के लाभ पर। लेन-देन के परिणामस्वरूप हानि (-) या लाभ (+) का प्रतिशत क्या है?

A. (+)4

B. (-)1

C. (+)1

D. (-)4

Answer: Option D

Solution:In such cases, always loss occurs. It can be calculated by this formula,

$= (\frac{loss\ or\ gain\ percentage}{100})^2 = 4$

That is 4% of loss

Graphic Change method

100 == 20%(loss) ⇒ 120 == 20%(gain) ⇒ 96

% Loss = 4%

25. A shopkeeper wishes to give 5% commission on the marked price of an article but also wants to earn a profit of 10%. If his cost price is Rs. 95, then marked price is:

एक दुकानदार किसी वस्तु के अंकित मूल्य पर 5% कमीशन देना चाहता है लेकिन 10% का लाभ भी कमाना चाहता है। यदि उसका क्रय मूल्य रु. 95 है, तो अंकित मूल्य है:

A. Rs. 100

B. Rs.110

C. Rs. 120

D. Rs. 130

Answer: Option B

Solution:CP = Rs. 95.

Then SP = 95 + 10% of 95 = Rs. 104.5

Let MP = X. He gives 5% commission on MP.

So,

SP = X - 5% of X

SP = 0.95X

104.5 = 0.95X

X = $\frac{104.5}{0.95}$=100

Thus, MP = Rs. 110

Short-cut

95 == 10% (gain) ⇒ 104.5 == 5% (Commission) ⇒ 109.72 (= 110)

26. Two successive discount of 10% and 20% are equivalent to a single discount of:

10% और 20% की दो क्रमिक छूट एक एकल छूट के बराबर हैं:

A. 30%

B. 28%

C. 26%

D. 25%

Answer: Option B

Solution:Use Formula,

Equivalent Discount = (A + B) - $\frac{AB}{100}$

where A = First Discount, B =Second Discount.

Equivalent Discount = (20 + 10) -$\frac{20\times10}{100}$

Equivalent Discount = 30 - 2 = 28%

Graphic Change Method

100 == 20% (disc.) ⇒ 80 == 10% (disc.) ⇒ 72

Equivalent discount = 28%

27. A dealer allows his customer a discount of 25% and still gains 25%. If cost price of a radio is Rs. 1440, its marked price is:

एक डीलर अपने ग्राहक को 25% की छूट देता है और फिर भी 25% का लाभ प्राप्त करता है। यदि एक रेडियो का क्रय मूल्य रु. 1440, इसका अंकित मूल्य है:

A. Rs. 2500

B. Rs. 2440

C. Rs. 2400

D. Rs. 2020

Answer: Option C

Solution: Let MP = X

CP = 1440

SP = 1440 + 25% of 1440 = Rs. 1800

SP = MP - 25% of MP

SP = X - 25% of 100

SP = X - 0.25X

1800 = 0.75X

X = 2400

MP = Rs. 2400

Short-Cut

Let the marked price = Rs. x

Hence , $\frac{75\times x}{100}=1440\times\frac{125}{100}$

$\Rightarrow\frac{1440\times125}{75}$

= Rs. 2400

28. The selling price of an article after giving two successive discounts of 10% and 5% on the marked price is Rs. 171. What is the marked price?

अंकित मूल्य पर 10% और 5% की दो क्रमिक छूट देने के बाद एक वस्तु का विक्रय मूल्य रु. है। 171. अंकित मूल्य क्या है?

A. Rs. 200

B. Rs. 220

C. Rs. 240

D. Rs. 250

Answer: Option A

Solution:Equivalent Discount=(A + B) -$\frac{AB}{100}$

= (10 + 5) -$\frac{10\times5}{100}$

= 14.5%

Let MP = X

Now,

X - 14.5% of X = 171(Selling Price)

0.855X = 171

X = 200

Hence, MP = Rs. 200

Going through options,

200(MP) == 10% (disc.) ⇒ 180 == 5% (disc.) ⇒ 171(CP)

29. A man purchased some fruits for Rs. 1000. He sold few fruits worth 400 at 10% profit. At what profit per cent, must he sell the rest in order to gain 20% on the whole?

एक आदमी ने कुछ फल रुपये में खरीदे। 1000. उसने 400 मूल्य के कुछ फल 10% लाभ पर बेचे। कुल मिलाकर 20% लाभ प्राप्त करने के लिए उसे शेष राशि कितने प्रतिशत लाभ पर बेचनी चाहिए?

A.$26\frac{2}{3}$%

B. 25%

C. 30%

D.$33\frac{1}{3}$%

Answer: Option A

Solution: To get 20% profit on whole,

1000(CP) ⇒ 20 % (gain) ⇒ 1200(SP)

Total Profit = 1200 - 1000 = Rs. 200

400 ⇒ 10% (gain) ⇒ 440

He gets Rs. 40 profit on 400

Rest Profit = 200 - 40 = 160

Then he must get Rs. 160 as profit on Rs. 600

Hence, % profit

$=\frac{160\times100}{600}$

$=\frac{80}{3}$

$=26\frac{2}{3}\%$

30. A dealer offers a cash discount of 20% and still makes a profit of 20%, when he further allows 16 articles to a dozen to a particularly sticky bargainer. How much percent above the cost price were his wares listed?

एक डीलर 20% की नकद छूट देता है और फिर भी 20% का लाभ कमाता है, जब वह एक विशेष सौदेबाजी करने वाले को एक दर्जन से 16 वस्तुओं की अनुमति देता है। उसका माल लागत मूल्य से कितने प्रतिशत ऊपर सूचीबद्ध था?

A. 100%

B. 80%

C. 75%

D.$66\frac{2}{3}\%$

Answer: Option A

Solution: Let the CP of the article be Rs. x, since he earns a profit of 20%, hence SP = X + 20% of X = 1.2x

It is given that he incurs loss by selling 16 articles at the cost of 12 articles [loss $=\frac{16-12}{16}=$ 25%]

His selling price = SP - 25% of SP = SP × 0.75

Hence, SP × 0.75 = 1.2X

Or, SP =1.2×x/0.75 = 1.6X

This SP is arrived after giving a discount of 20% on MP.

Let MP = Y

Y - 20% of Y = SP

0.80Y = 1.6X

Y = 2X

It means that the article has been marked 100% above the cost price. Or Marked Price was twice of cost price.