

Discounts - Solved Examples

Q 1 - Find the P.W. of Rs. 9920 due 3 years at 8% p.a.

A - Rs 7000

B - Rs 8000

C - Rs 6000

D - Rs 7000

Answer - B

Explanation

$$\begin{aligned} \text{P.W.} &= ((100 \times \text{Amount})) / (100 + (R \times T)) \\ &= \text{Rs } \{(100 \times 9920) / (100 + (3 \times 8))\} \\ &= \text{Rs } (100 \times 9920) / 124 \\ &= \text{Rs } 8000 \end{aligned}$$

Q 2 - The genuine rebate on a bill due 9 months consequently at 6% for each annum is Rs. 180. Discover its present worth.

A - Rs 4000

B - Rs 5000

C - Rs 3000

D - Rs 6000

Answer - A

Explanation

$$\begin{aligned} \text{P.W.} &= ((100 \times \text{T.D.}) / ((R \times T))) \\ &= \text{Rs } \{(100 \times 180) / (6 \times 3/4)\} \\ &= \text{Rs } 4000 \end{aligned}$$

Q 3 - The genuine markdown on a sure total of cash due 3 years consequently is Rs 200 and the straightforward enthusiasm on the some aggregate for the same time and at the same guideline is Rs. 240. Discover the aggregate and the rate percent.

A - Rs 1200

B - Rs 1000

C - Rs 1200

D - Rs 1000

Answer - A

Explanation

$$\begin{aligned} \text{T.D} &= \text{Rs } 200 \text{ and } \text{S.I.} = \text{Rs } 240 \\ \text{Sum due} &= (\text{S.I.} \times \text{T.D.}) / (\text{S.I.} - \text{T.D.}) \\ &= \text{Rs } ((240 \times 200) / ((240 - 200))) \\ &= \text{Rs } 1200 \end{aligned}$$

Q 4 - The genuine rebate on Rs 1860 due after a sure time at 5% p.a. is Rs. 60. Discover the time after which it is expected.

A - 10 months

B - 8 months

C - 7 months

D - 6 months

Answer - B

Explanation

$$\text{P.W.} = (\text{Amount}) - (\text{T.D.})$$

$$= \text{Rs } (1860 - 60)$$

$$= \text{Rs } 1800$$

T.D. is S.I. on P.W.

Rs. 60 is S.I. on Rs 1800 at 5% p.a.

$$\text{Time} = ((100 \times 60)) / ((5 \times 1800)) \text{ years}$$

$$= 2/3 \text{ years}$$

$$= 2/3 \times 12 \text{ months}$$

$$= 8 \text{ months}$$

Q 5 - Find the rebate on Rs. 9920 due 3 years at 8% p.a.

A - Rs 1720

B - Rs 1820

C - Rs 1920

D - Rs 1220

Answer - C

Explanation

$$\begin{aligned} \text{P.W.} &= ((100 \times \text{Amount})) / (100 + (R \times T)) \\ &= \text{Rs } \{(100 \times 9920) / (100 + (3 \times 8))\} \\ &= \text{Rs } (100 \times 9920) / 124 \\ &= \text{Rs } 8000 \\ \text{T.D.} &= (\text{Amount}) - (\text{P.W.}) \\ &= \text{Rs } (9920 - 8000) \\ &= \text{Rs } 1920 \end{aligned}$$

Q 6 - The genuine rebate on a bill due 9 months consequently at 6% for each annum is Rs. 180. Discover the charge's measure.

A - Rs 4180

B - Rs 3180

C - Rs 2180

D - Rs 1180

Answer - A

Explanation

$$\begin{aligned} \text{P.W.} &= ((100 \times \text{T.D.})) / ((R \times T)) \\ &= \text{Rs } \{(100 \times 180) / (6 \times 3/4)\} \\ &= \text{Rs } 4000 \\ \text{Sum} &= (\text{P.W.} + \text{T.D.}) \\ &= \text{Rs } (4000 + 180) \\ &= \text{Rs } 4180 \end{aligned}$$

Q 7 - The genuine markdown on a sure total of cash due 3 years consequently is Rs 200 and the straightforward enthusiasm on the some aggregate for the same time and at the same guideline is Rs. 240. Discover the rate percent.

A - 50/3% p.a

B - 40/3% p.a

C - 10/3% p.a

D - 20/3% p.a

Answer - D

Explanation

T.D = Rs 200 and S.I. = Rs 240

Sum due = $(S.I. \times T.D.) / (S.I. - T.D.)$

= Rs $((240 \times 200) / ((240 - 200)))$

= Rs 1200

T.D is S.I. on the sum.

Rs. 240 is S.I. on Rs 1200 for a long time.

R = $((100 \times 240) / ((1200 \times 3)))\%$ p.a.

= 20/3% p.a

Q 8 - The genuine markdown on Rs 2575 due 4 months thus is Rs. 75. Discover the rate of hobby.

A - 6% p.a.

B - 7% p.a.

C - 8% p.a.

D - 9% p.a.

Answer - D

Explanation

Amount = Rs 2575, T=4/12 years = 1/3 years, T.D = Rs. 75

P.W. = (Amount) - (T.D.) = Rs (2575-75) = 2500.

T.D. Is S.I. on P.W.

R.s 75 is S.I. on Rs. 2500 or $1/3$ years

Rate = $((100 \times 75) / (2500 \times 1/3))\%$ p.a. = 9% p.a.

Q 9 - The genuine rebate on a bill due 10 months consequently at 6% p.a. is Rs 26.25. Discover the charge's measure.

A - Rs 451.25

B - Rs 551.25

C - Rs 351.25

D - Rs 251.25

Answer - B

Explanation

T.D. = Rs 26.25, $T = 10/12$ year = $5/6$ year, $R = 6\%$ p.a.

Let P.W. be Rs x. Then,

S.I. on Rs x at 6% p.a. for $5/6$ year is Rs. 26.25

$\therefore (x * 6 * 5/6) / 100 = 26.25$

$\Rightarrow x = (26.25 * 20) = 525$

$\therefore (P.W.) + (T.D.) = \text{Rs. } (525 + 26.25) = \text{Rs } 551.25$

Q 10 - The contrast between the S.I. what's more, T.D. on a sure whole of cash for 6 months at 6% p.a. is Rs. 27. Discover the total.

A - 32900

B - 30900

C - 31900

D - 33900

Answer - B

Explanation

$$\begin{aligned} \text{S.I.} &= \text{Rs. } (x * 6 * 1/2)/100 \\ &= \text{Rs. } 3x/100 \text{ and T.D.} \\ &= \text{Rs } \{(x * 78/12)/(100+(6 * 6/12))\} \\ &= \text{Rs. } 3x/103 \\ \therefore 3x/100 - 3x/103 &= 27 \\ \Rightarrow (309x - 300x) &= (27 * 100 * 103) \\ \Rightarrow x &= ((27*100*103))/9 \\ &= 30900 \end{aligned}$$