Tender Heart High School, Sec.-33B chd.

Class: VII **Teacher:** Ms. Deepti

Subject: Mathematics

Revision for Unit-test - I (Term-II)

Chapter - 11 and Exercise - 14A

Try all these questions and after that check your solution from the given assignment

Quest.1 Solve the following equation and verify, also show the answer on the number line.

a. $5x - 17 = 2x - 8$

b. $\frac{x}{4} + \frac{x}{6} = x - 7$

c. $\frac{2x}{3} - \frac{(x-8)}{6} = \frac{2(2x+19)}{9}$

d. $10(4x+1) + 15(2x-1) = 180 + 6(3x-7)$

Quest.2 In what time will a sum of money lent at $8\frac{1}{3}\%$ simple interest become 4 times of itself?

Quest.3 A sum of money lent at simple interest for 3 years at 6% p.a, amount to ₹ 35400. find the principal amount.

Quest.4 Find the simple interest and amount of ₹ 12000 for 3 years at 10% p.a.

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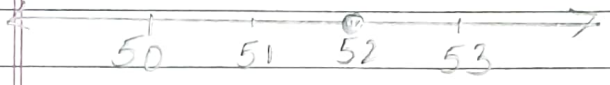
$9x + 24 = 8x + 76$

$9x - 8x = 76 - 24$

$\boxed{x = 52}$



Verification

$L.H.S = \frac{2 \times 52}{3} - \frac{(52-8)}{6}$

$= \frac{104}{3} - \frac{44}{6}$

$= \frac{82}{3}$

$R.H.S = \frac{2(102+19)}{9}$

$= \frac{2 \times 123}{9} = \frac{82}{3} = L.H.S$

Hence Verified

d. $10(4x+1) + 15(2x-1) = 180 + 6(3x-7)$

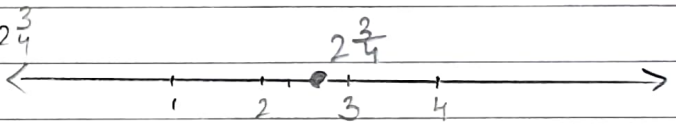
$40x + 10 + 30x - 15 = 180 + 18x - 42$

$70x - 5 = 138 + 18x$

$70x - 18x = 138 + 5$

$52x = 143$

$x = \frac{143}{52} = \frac{11}{4} = 2\frac{3}{4}$



Soln 2 Let the principal be $= x$

$\Rightarrow$ Amount $= 4x$

$S.I = A - P = 4x - x = 3x$, Rate $= 8\frac{1}{3}\% = \frac{25}{3}\%$

$\text{Time} = \frac{100 \times S.I}{P \times R} = \frac{100 \times 3x}{x \times 25/3} = \frac{100 \times 3 \times 3}{25}$

$= \boxed{36 \text{ years}}$

Soln 3 Amount $= ₹35400$, $T = 3$ yrs, $R = 6\%$

Let the principal be ₹100

then $S.I = \frac{P \times R \times T}{100} = \frac{100 \times 6 \times 3}{100} = ₹18$

Amount $= P + I = ₹118$

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For amount ₹118, principal = ₹100

₹1, principal = ₹ $\frac{100}{118}$

₹35400, principal = ₹ $\frac{100}{118} \times 35400^{300}$

= ₹ 30,000

⇒ **Principal = ₹ 30,000**

Soln 4: P = ₹12000, T = 3 yrs, R = 10% p.a

$S.I = \frac{P \times R \times T}{100} = \frac{12000 \times 10 \times 3}{100} = ₹3600$

Amount = P + I = ₹ 12000 + ₹3600

= **₹15600**

Soln 5: P = ₹1625, A = ₹2080, T = $3\frac{1}{2}$ yrs = $\frac{7}{2}$ yrs

Rate = ?

I = ₹2080 − ₹1625 = ₹455

$Rate = \frac{100 \times S.I}{P \times T} = \frac{100 \times ₹455}{1625 \times \frac{7}{2}}$

$= \frac{100 \times 455}{1625 \times 7} \times 2 = 8\%$

Rate = 8%