Election Voting Problem.

Q In a election between two Candidates a person who 35% of Votes lost the election by a margin of 15,000 Votes, find total Votes.

Sol Let Assume The Two persons are 'A' & 'B'

As given A got 35% of Votes of 100% Votes
Thus, B got Rest 65% of Votes.
And The Difference between 'A' & 'B' is 15,000 Votes

Thus, $A - B = 15000$

$35\% - 65\% = 15000$

$30\% = 15000$

If 30% of Votes are 15000 $(30\% = 15000)$ — eq ①

Then 10% of Votes are eq ① ÷ 3.

$\Rightarrow \frac{30\%}{1} = \frac{15000}{5}$

$= 10\% = 5000 \rightarrow$ eq ②

Now eq ① Multiply with 3 to get 90% of Votes

$\Rightarrow (30\% = 15000) \times 3$

$\Rightarrow 90\% = 45000 \rightarrow$ eq ③

Now, Total Votes Casted are eq ② + eq ③

$\Rightarrow 10\% = 5000$

$90\% = 45000$

$100\% = 50000$

Total No. of Votes are 50,000

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Rough

$\frac{1}{8}\% \times = \frac{5}{1620}$

$x = 5$

$\frac{1}{8\%} \times = \frac{2}{1620}$

$\frac{45}{8\%} \times = 1620$

$x = \frac{1.5}{z_1}^{27.5}$

27.5×100

81
× 3
243

Q 10% of Votes Not Casted, 10% Not Valed The Winner got 54% of Voted. With Majority 1620 Total NooF Votes Enrolled for Voting.

Winner = 54%

Losser = 46%

Difference = 54 − 46 = 8%

= 8% = 1620

Sol lets Assume ToTal Votes = 100

10% Not Casted i.e., 10% − 100 = 90 Votes left

Another 10% Not Valid = 10% − 90 = 81 left.

ToTal Assumed Valid Votes are = 81

Winner got 54% of 81

Losser got 46% of 81

Diff has 8% / 81

	Total	Majority
Original	x	1620
Assumed	100	8% / 81

$\frac{1}{x}\left(\frac{x}{8\%} \cdot 81\right) = \frac{50}{100} \times \frac{45}{1620}$

$x\left(\frac{1}{8\%} \cdot 81\right) = \frac{50}{100} \cdot \frac{20}{1620}$

$x = 50 \times 5 \Rightarrow 250 \times 100 = 25000$

Q In election between 2 Candidates, One got 55% of total valid votes, 20% of the votes are Invalad. Total voter are 7500 find 2nd person votes.

Sol Total Voters are 7500
Invalid are 20% i.e = 1500.
Valid Voters are 6000

If 1st person got = 55%
Then 2nd got = 45%

1st person Voter are 55% 6000 = 3300
2nd person Voter are 45% 6000 = 2700
6000

∴ 2nd person votes are 2700.