Problem of the Week
Problem C and Solution
Vote!

Problem

In an election for a grade representative on the school council, there were only two candidates. Freda First received 60% of the total votes and Saheel Second received all the rest. If Freda won by 28 votes, how many people voted?

Solution

If Freda received 60% of the votes, then Saheel received 40% of the total number of votes. The difference between them, 20%, represents 28 votes.

We are interested in determining 100% of the votes, that is, the total number of votes cast. Since we know that 20% of the total votes cast was 28 votes and $5 \times 20 = 100$, then the total number of votes cast was $5 \times 28$ or 140 votes.

Solution 2

The second solution uses an algebraic approach.

Let $n$ represent the total number of votes cast.

Since Freda received 60% of the total votes, she received $0.6 \times n$ or $0.6n$ votes.

Since Saheel received all of the remaining votes, he received $0.4 \times n$ or $0.4n$ votes.

We know that the difference between the number of votes received by Freda and the number of votes received by Saheel was 28. So,

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0.6n - 0.4n = 28
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0.2n = 28
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0.2n = 28
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0.2 = 0.2
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n = 140
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Therefore, there were 140 votes cast.