## Solve each problem.

1) In a library there was a donation box for books. A librarian wanted to estimate how many fiction and how many non-fiction books were in the box so she pulled out a sample. The results are shown below:

| Sample \# | $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ | $\mathbf{5}$ | $\mathbf{6}$ | $\mathbf{7}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Fiction | 22 | 21 | 20 | 21 | 23 | 20 | 22 |
| Non-Fiction | 30 | 31 | 30 | 29 | 28 | 30 | 28 |

Based on the information presented can you infer anything about the types of books donated?
2) During a class election a teacher wanted to predict who would win. To do this she took a sample of students from each class and asked who they would vote for. The results are shown below:

| S \# | $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ | $\mathbf{5}$ | $\mathbf{6}$ | $\mathbf{7}$ | $\mathbf{8}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Candidate A | 59 | 61 | 61 | 62 | 59 | 62 | 61 | 59 |
| Candidate B | 51 | 54 | 52 | 52 | 51 | 51 | 52 | 50 |

Based on the information presented can you infer anything about who will win the election?
3) In a lake there are 3 types of fish: minnows, goldfish and sunfish. A fisherman wanted to estimate how many of each type there were. He scooped up several nets full and recorded his results (shown below).

| S \# | $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ | $\mathbf{5}$ | $\mathbf{6}$ | $\mathbf{7}$ | $\mathbf{8}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| minnows | 2 | 1 | 4 | 5 | 5 | 4 | 3 | 1 |
| goldfish | 2 | 5 | 5 | 5 | 5 | 3 | 3 | 5 |
| sunfish | 3 | 3 | 1 | 3 | 4 | 3 | 1 | 3 |

Based on the information presented can you infer anything about the number of different types of fish in the lake?

## Solve each problem.

1) In a library there was a donation box for books. A librarian wanted to estimate how many fiction and how many non-fiction books were in the box so she pulled out a sample. The results are shown below:

| Sample \# | $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ | $\mathbf{5}$ | $\mathbf{6}$ | $\mathbf{7}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Fiction | 22 | 21 | 20 | 21 | 23 | 20 | 22 |
| Non-Fiction | 30 | 31 | 30 | 29 | 28 | 30 | 28 |

Based on the information presented can you infer anything about the types of books donated?
Based on the information presented there will be $27 \%$ more Non-Fiction books donated.
2) During a class election a teacher wanted to predict who would win. To do this she took a sample of students from each class and asked who they would vote for. The results are shown below:

| $\mathbf{S} \#$ | $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ | $\mathbf{5}$ | $\mathbf{6}$ | $\mathbf{7}$ | $\mathbf{8}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Candidate A | 59 | 61 | 61 | 62 | 59 | 62 | 61 | 59 |
| Candidate B | 51 | 54 | 52 | 52 | 51 | 51 | 52 | 50 |

Based on the information presented can you infer anything about who will win the election?
Based on the information presented Candidate A will have $14 \%$ more votes.
3) In a lake there are 3 types of fish: minnows, goldfish and sunfish. A fisherman wanted to estimate how many of each type there were. He scooped up several nets full and recorded his results (shown below).

| S \# | $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ | $\mathbf{5}$ | $\mathbf{6}$ | $\mathbf{7}$ | $\mathbf{8}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| minnows | 2 | 1 | 4 | 5 | 5 | 4 | 3 | 1 |
| goldfish | 2 | 5 | 5 | 5 | 5 | 3 | 3 | 5 |
| sunfish | 3 | 3 | 1 | 3 | 4 | 3 | 1 | 3 |

Based on the information presented can you infer anything about the number of different types of fish in the lake?

$$
\begin{aligned}
& \text { Based on the information presented and the small samples gathered it is impossible to } \\
& \text { make any meaningful assumptions. }
\end{aligned}
$$

