## 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 \# | $\mathbf{1}$ | $\mathbf{2}$ |
| :---: | :---: | :---: |
| Fiction | 3 | 0 |
| Non-Fiction | 1 | 2 |

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:

| $\mathbf{S} \#$ | $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ | $\mathbf{5}$ | $\mathbf{6}$ | $\mathbf{7}$ | $\mathbf{8}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Candidate A | 51 | 48 | 52 | 49 | 49 | 51 | 51 | 52 |
| Candidate B | 49 | 52 | 51 | 49 | 49 | 52 | 50 | 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 | 23 | 25 | 23 | 21 | 25 | 23 | 23 | 23 |
| goldfish | 34 | 32 | 32 | 34 | 32 | 32 | 30 | 32 |
| sunfish | 42 | 41 | 40 | 38 | 39 | 42 | 42 | 42 |

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 \# | $\mathbf{1}$ | $\mathbf{2}$ |
| :---: | :---: | :---: |
| Fiction | 3 | 0 |
| Non-Fiction | 1 | 2 |

Based on the information presented can you infer anything about the types of books donated?

## Based on the information presented and the small samples gathered it is impossible to

 make any meaningful assumptions.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 | 51 | 48 | 52 | 49 | 49 | 51 | 51 | 52 |
| Candidate B | 49 | 52 | 51 | 49 | 49 | 52 | 50 | 50 |

Based on the information presented can you infer anything about who will win the election?
Because of the very small discrepancy in the quantities it is unlikely any deduction can be made about who will win.
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 | 23 | 25 | 23 | 21 | 25 | 23 | 23 | 23 |
| goldfish | 34 | 32 | 32 | 34 | 32 | 32 | 30 | 32 |
| sunfish | 42 | 41 | 40 | 38 | 39 | 42 | 42 | 42 |

Based on the information presented can you infer anything about the number of different types of fish in the lake?
Based on the information presented there will be more sunfish in the lake than minnows or goldfish.

