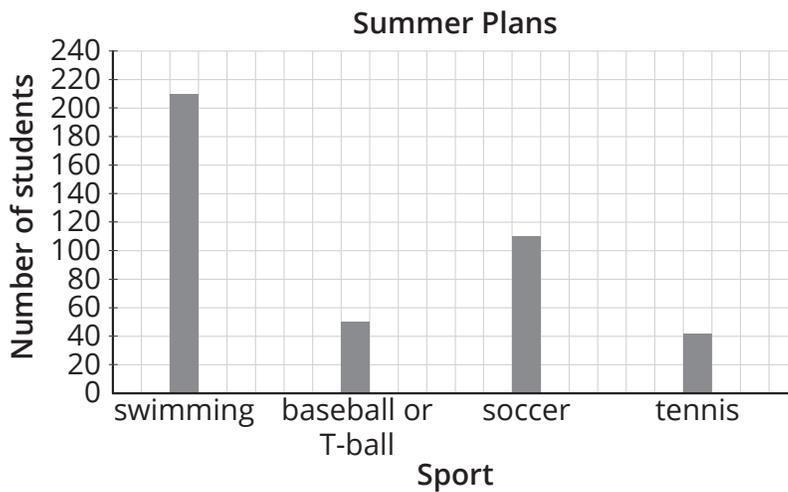


### 3 Effect of a Scale on a Graph

Your Turn Questions

- Sara made two double bar graphs to show the same data. For one graph, she used a scale of 1. For the other graph, she used a scale of 100. Which of these statements is **not** true?

  - A The difference between the greatest and the least data values on one graph is the same as it is on the other graph.
  - B A different bar might be highest on each graph.
  - C Data values that are 10 apart look quite different on the two graphs.
  - D Each graph shows two sets of data.
  
- a) This graph shows that 210 people plan to swim, 50 people plan to play baseball or T-ball, 110 people plan to play soccer, and 40 people plan to play tennis.



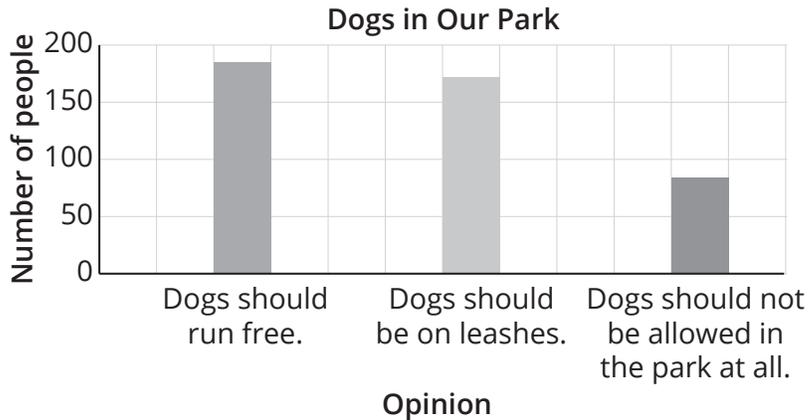
Create a new version of the graph. Use a scale of 5.

- b) Do you think the two graphs give the same impression? Explain.

### 3 Effect of a Scale on a Graph

Your Turn Questions (continued)

3. A city asked people in one of its neighbourhoods whether they wanted a new park that would allow dogs to run free, require dogs to be on leashes, or not allow dogs at all. This graph shows the results of the survey.



Based on the survey results, the city decided to allow dogs on leashes in the park.

- a) Does the graph suggest a clear answer to the question "Should dogs be on leashes in the park?" Explain.

- b) If you changed the scale of the graph to 5, would your answer to part a) change? Why or why not?

### 3 Effect of a Scale on a Graph

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Your Turn Questions (continued)

4. **a)** Create a broken-line graph to show how something changes over time. Use a scale that makes it look like there is only a little bit of change from one time period to the next.
- b)** Graph the same set of data. This time, use a scale that makes it look like the values change a lot from one time period to the next.