

1. Students recorded their heights, in inches, when they graduated from kindergarten in 1999 and again when they graduated from high school in 2011.

1999: 39 41 41 43 45 46 47 46 48 47 44 38 41 39 43 46 44

2011: 60 74 76 62 64 61 66 68 71 76 74 73 72 69 64 63 60

- a) Determine the mean and standard deviation for each year.
 b) Compare the heights for the two years. Which set of heights has a greater standard deviation? Describe some of the possible reasons for this greater deviation.
2. The chest circumferences of Scottish militiamen in the 19th century are given in the frequency table to the right.

- a) Are the chest circumferences normally distributed? Explain.
 b) Determine the z -score for a Scottish militiaman with a 42 in. chest circumference.

3. Brenda searched the Environment Canada website and found that the mean daily temperature in Edmonton in March is -2.6°C , with a standard deviation of 3.2°C . The mean daily temperature in Calgary in March is -1.9°C , with a standard deviation of 2.8°C . Compare the temperatures at these two locations in March.

4. In a Canada Day poll, 1009 Canadians were asked “What are things about Canada that make you proud?” 88% of respondents said the flag, 80% said hockey, and 44% said the Canadian justice system. The poll was reported accurate to within $\pm 3.1\%$, 19 times out of 20.

- a) Use confidence intervals to interpret the poll results.
 b) At the time of the poll, Statistics Canada estimated Canada’s population at 34 019 000. Determine the range of people in Canada, based on this poll, who would answer hockey makes them proud of Canada.
 c) If the polling company conducted this same survey using the same sample size, but used a confidence level of 99%, what would happen to the margin of error? Explain.

Chest Circumference (in.)	Frequency
33	3
34	18
35	81
36	185
37	420
38	749
39	1073
40	1079
41	934
42	658
43	370
44	92
45	50
46	21
47	4
48	1

WHAT DO You Think Now? Revisit **What Do You Think?** on page 209. How have your answers and explanations changed?