Time Spent by 40% of Adults

Radio Listening Time

TV Viewing Watched Each Week

(b) Newspapers: There are more weekend readers who read double the time that weekday readers read. Books and Magazines: 40% of adults read books four times longer than they read magazines. Radio: Adults listen to the radio twice as much as youths. Television: Adults watch more television than youths and children.
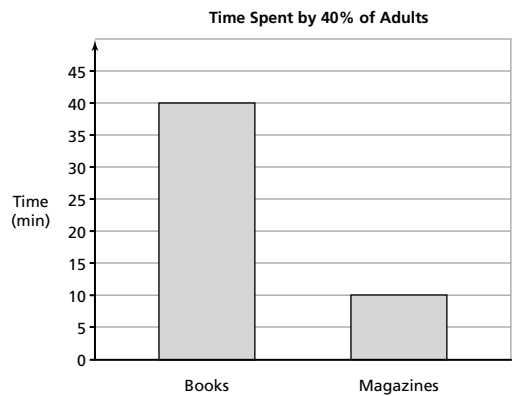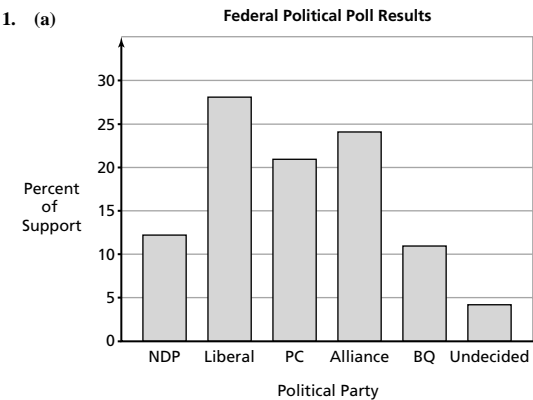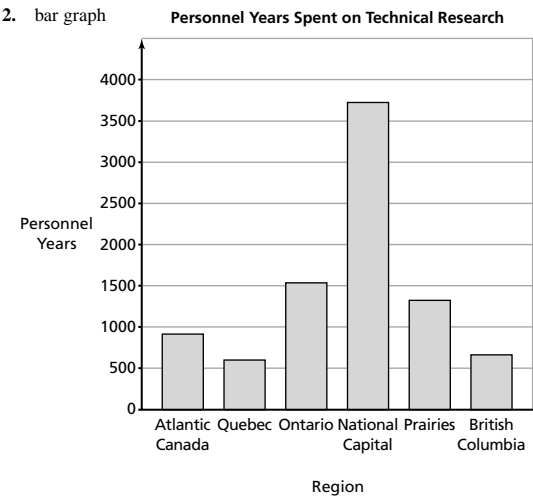
Chapter 1 Wrap-Up, page 68

1. (a)

Federal Political Poll Results

Federal Political Poll Results
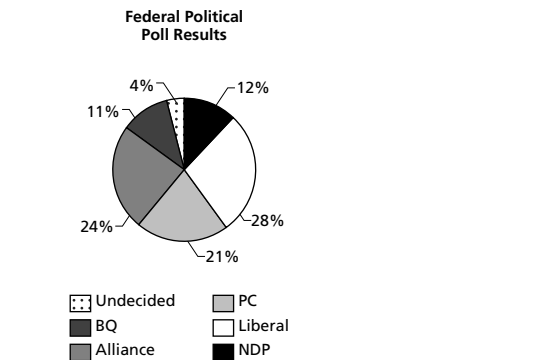
(b) Bar graph is easier because you can clearly see which bars are higher.

2. bar graph

Personnel Years Spent on Technical Research

3. (a)

Pulse Rate

Pulse Rate (beats/min) vs Age (years): 0–1, 1–9, 10–19, 20–59, 60–69, 70+

(b)

Sports Data
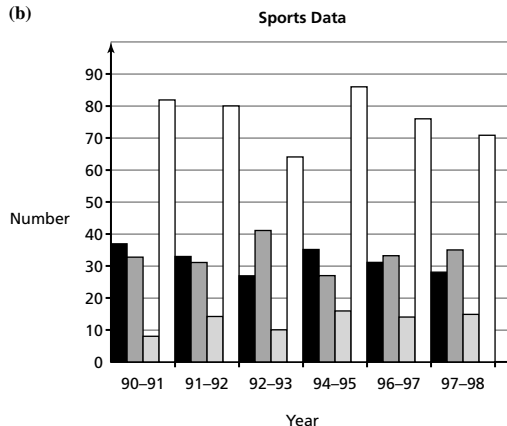
Number vs Year: 90–91, 91–92, 92–93, 94–95, 96–97, 97–98

■ Wins ■ Losses ■ Ties □ Points

(c)

Total Monthly Precipitation in Thunder Bay
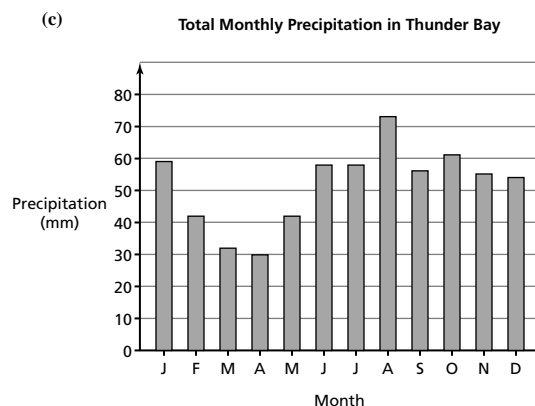
Precipitation (mm) vs Month: J F M A M J J A S O N D
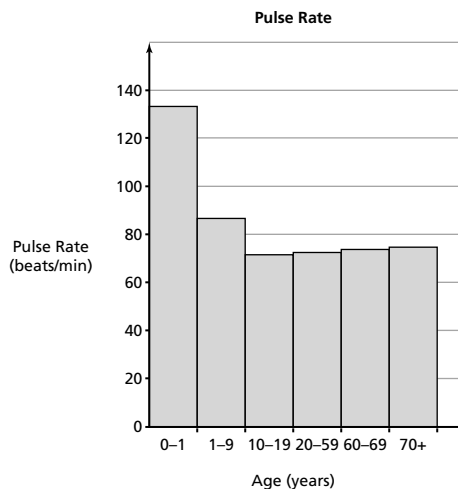
4. (a) no

(b) You need the average consumption from other countries.

(c), (d) The daily average water consumption, excluding water used by agriculture and industry, is higher in North America than in Switzerland, U.K., Nigeria, West Germany, Belgium, and India combined, which the writer misidentified.
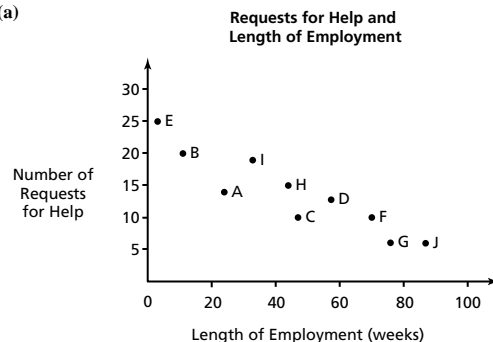
(e) Research the consumption from other countries.

5. (a) $y = 3.2485x + 4.1394$

(b) Answers may vary, e.g.: Mass $= \frac{10}{3} \times$ age $+ \frac{11}{3}$

(c) Answers may vary, e.g.: 57 kg

(d) Mass $= 3.2485 \times$ age $+ 4.1394$. Mass of a 16-year-old boy: 56.12 kg; $r = 0.962\ 374$, confident

6. (a)

Requests for Help and Length of Employment

Number of Requests for Help vs Length of Employment (weeks)

(b) less often

7. (a) $y = -0.0335x + 8.4679$

(b) Strong negative correlation; Yes, this is expected. A car will operate more efficiently at a moderately quick speed.

8. (c) Answers will vary; for example: $y = 0.411\ 429x + 0.642\ 857$

(d) 25; 21 using line of best fit. Close because answers are close each time, but different.

9. (a) Average wage per hour implies making the same income across Canada, but pay is very different when you work less hours.
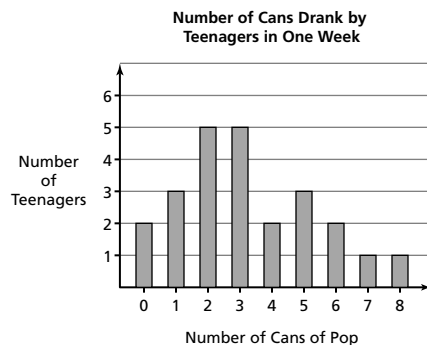
(b) No, this impression is not accurate.

(c) Add another graph showing total yearly income across Canada.

Chapter 1 Test, page 71

1. (a) Yes, students think Math teachers are nerds. No, because kids were asked to draw mathematicians, not math teachers.

(b) There is a misconception that mathematicians (and intelligent people, in general) are nerds.

2. (a)

Number of Cans Drank by Teenagers in One Week

Number of Teenagers vs Number of Cans of Pop: 0 1 2 3 4 5 6 7 8

(b) A frequency table would be quicker.

3. (a) $y = 0.1357x + 0.7714$

(b) Mass $= 0.135\ 724\ 85 \times$ age $+ 0.7714$

(c) 2.13 kg

(d) strong positive correlation

4. (a) no correlation

(b) strong correlation; more rainfall helps vegetation grow

(c) strong correlation; more mass means higher fuel consumption

5. (a) 4   5 8 9

5   1 2 4 5 5 6 7 7 8 9

6   0 1 2 2 3 7 8

7   1 5

(b) 6 games

(c) 18.2%

(d) In only 9% of the games did the team score more than 68 points. It is not very likely.