

Chapter 3 Test

- Knowledge and Understanding** Create a graph of the following data.
12.0, 15.0, 13.7, 15.5, 12.7, 14.5, 14.4, 12.8, 14.3, 13.8, 15.2, 16.2, 14.0, 12.4, 15.0, 16.1, 12.9, 13.6, 12.8, 15.2, 13.9, 13.7, 14.6, 16.6, 16.9, 15.1
- Application** Consider the following Scrabble scores.
Min: 140, 110, 130, 155, 182, 132, 175, 107, 168, 174, 135
Jan: 210, 208, 190, 238, 203, 222, 159, 234, 253, 256, 243
Gigi: 171, 181, 212, 160, 177, 167, 241, 145, 156, 215, 204
 - Calculate the mean, median, and mode of each player's scores.
 - Calculate the quartile values, interquartile range, and the standard deviation of each player's scores.
 - How many of each player's scores fell within one standard deviation of the mean? Two standard deviations? Three standard deviations?
- Communication** Marnie is canvassing for the Canadian Institute for the Blind. Using your knowledge of normal distribution, what range of values should Marnie be prepared to accept this year, if the average donation is \$75 with a standard deviation of \$15. Explain.
- Researchers have observed that regular smokers have an average lifespan that is normally distributed and is 68 years with a standard deviation of 10 years. What percent of smokers will live beyond age 76?
- Thinking, Inquiry, Problem Solving** The lifespan of computers is normally distributed. If computer monitors have an average lifespan of 4.8 years with a standard deviation of 1.42 years, and your company bought 45 monitors (which includes 8 extras), how long until you need to buy more?
- Calculate a three-day moving average for gas at the local gas station, and create a time-series graph showing the price (¢/L) and the moving average.
65.2 68.1 61.1 63.4 68.7 65.5 63.9 69.1
63.5 65.8 69.9 68.1 71.0 67.7 69.0 69.5
- An index for comparing professional hockey players uses the formula below. Rank the following players in order by evaluating their "Q-value."

$$Q = 2G + A + \frac{PIM}{5}$$

	G	A	PIM
Jerome Iginla	31	40	62
Joe Thornton	37	34	107
Paul Kariya	33	34	20
Joe Sakic	54	64	30
Doug Weight	25	65	91

G = goals; A = assists; PIM = penalties in minutes