

7. In 2004, Ichiro Suzuki broke the Major League Baseball record for hits in a season (262 hits) that had been held by George Sisler since 1920 (257 hits). The mean number of hits for everyday players in 1920 was 158 with a standard deviation of 30. The mean number of hits for everyday players in 2004 was 155 with a standard deviation of 25. Who had the better *PERFORMANCE*, Sisler or Ichiro? Explain your reasoning.
8. In 2008, Drew Brees of the New Orleans Saints nearly broke Dan Marino's record, set in 1984, for most passing yards in a season. Brees has 5069 yards, just shy of Marino's 5084. Using the top 28 quarterbacks of 1984 (since there were 28 teams), the mean number of yards was 2839 with a standard deviation of 927. The mean number of yards for the top 32 quarterbacks in 2008 was 3132 with a standard deviation of 886. Who had the better *PERFORMANCE*, Marino or Brees? Explain your reasoning.
9. Suppose that you and your friends decided to start a fantasy basketball league using NBA players. You will keep track of your players' statistics for 4 variables: points, rebounds, assists, and turnovers, and each of these variables will count equally in the overall standings. The table shows the mean and standard deviation for each of these variables using data from the 2008–2009 regular season and only considering players with at least 60 games played. The table also shows the *PERFORMANCES* of three individual players. Using the methods of this chapter, rank these players in order of overall fantasy value. *Hint:* Since being above average in turnovers is bad, add the z-scores for points, rebounds, and assists and subtract the z-score for turnovers to measure overall fantasy value.

	POINTS	REBOUNDS	ASSISTS	TURNOVERS
Dwayne Wade	30.2	5.0	7.5	3.4
Dirk Nowitzki	25.9	8.4	2.4	1.9
Dwight Howard	20.6	13.8	1.4	3.0
Mean	11.1	4.5	2.4	1.5
Standard deviation	5.8	2.4	2.0	0.7

10. Suppose that you and your friends decided to start a fantasy baseball league using Major League Baseball players. You will keep track of your pitchers' statistics for 3 variables: wins, strikeouts, and ERA (average numbers of runs given up per 9 innings), and each of these variables will count equally in the overall standings. The table shows the mean and standard deviation for each of these variables using data from the 2009 regular season and only considering pitchers with at least 100 innings pitched. The table also shows the *PERFORMANCES* of three individual pitchers. Using the methods of this chapter, rank these players in order of overall fantasy value. *Hint:* Since being above average in ERA is bad, add the z-scores for wins and strikeouts and subtract the z-score for ERA to measure overall fantasy value.