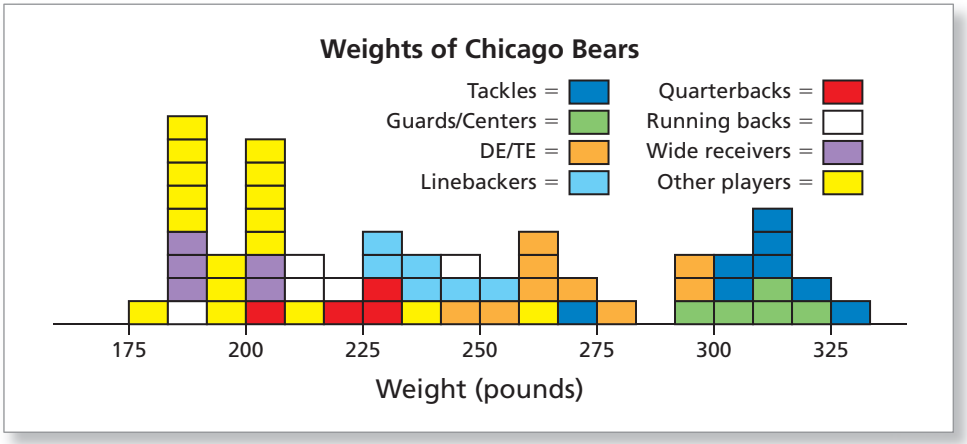
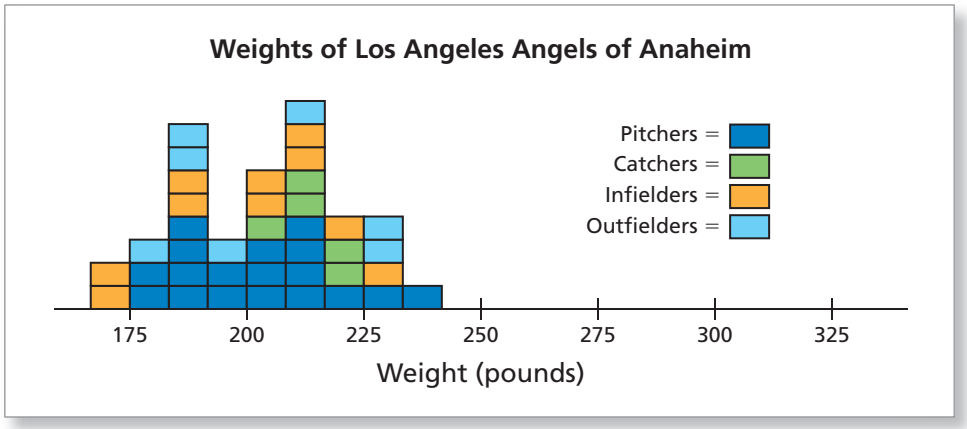
EXAMPLE 4 Reading Histograms

The color-coded histograms show the data from Example 3 in a different way. Compare the histograms to the box-and-whisker plots. What new information do the histograms provide?

The mean weight of Major League Baseball (MLB) pitchers is not very different from the mean weight of the players in general.





SOLUTION

The histograms do not show the medians or quartiles of the data sets.

On the other hand, the histograms show how the data are distributed. You can make the following observations that are not evident in the box-and-whisker plots.

- For *football players*, there is a correlation between weight and position. Tackles, guards, centers, tight ends, and defensive ends tend to weigh considerably more than the other players.
- For *baseball players*, there is not a strong correlation between weight and position.

Checkpoint

Help at Math.andYOU.com

Make histograms showing the weights of players on another NFL team and another MLB team. Are the histograms similar to the two above? Explain your reasoning.