

Lesson 3: Describing Quantitative Data: Shape

Preparation

Solutions

Please note that the steps show rounded numbers, but that the final answers to the problems are calculated without rounding. (Questions 1-5)

Problem	Part	Solution
1	Mean	It is the adding up the observed data and dividing by the number of observations in the data set.
1	Median	The median is the middle value in a sorted data set
2	Company A	Mean: 21.276 Median: 13.433
2	Company B	Mean: 33.482 Median: 20.838
2	Company C	Mean: 41.122 Median: 25.558
2	Company D	Mean: 0.706 Median: 1.892
2	Company E	Mean: -1.084 Median: -3.796

Problem	Part	Solution
<p>The figure displays five histograms, labeled A through E, each representing a different data set. The x-axis for all histograms is labeled 'value' and ranges from -100 to 250, with major tick marks at -100, 0, 100, and 200. The y-axis is labeled 'count' and ranges from 0 to 15, with major tick marks at 0, 5, 10, and 15. Each histogram has a gray header bar with its label (A, B, C, D, or E) in the center.</p> <ul style="list-style-type: none"> Histogram A: The distribution is centered at 0. The highest frequency is 8, occurring for values between -25 and 0, and between 0 and 25. There are smaller bars at -50, 50, 100, and 150. Histogram B: The distribution is centered at 100. The highest frequency is 5, occurring for values between 75 and 100, and between 100 and 125. There are smaller bars at 50, 125, and 150. Histogram C: The distribution is centered at 200. The highest frequency is 4, occurring for values between 175 and 200, and between 200 and 225. There are smaller bars at 150, 225, and 250. Histogram D: The distribution is centered at 0. The highest frequency is 12, occurring for values between -25 and 0, and between 0 and 25. There are smaller bars at -50, 50, and 100. Histogram E: The distribution is centered at 0. The highest frequency is 9, occurring for values between -25 and 0, and between 0 and 25. There are smaller bars at -50, 50, and 100. 		
3	-	
4	-	Answers will vary but should talk about shape, center, and spread of the different graphs and data sets.
5	-	Answers may vary, students should choose a company and justify why. They will probably choose B or C, because they have the highest means.