

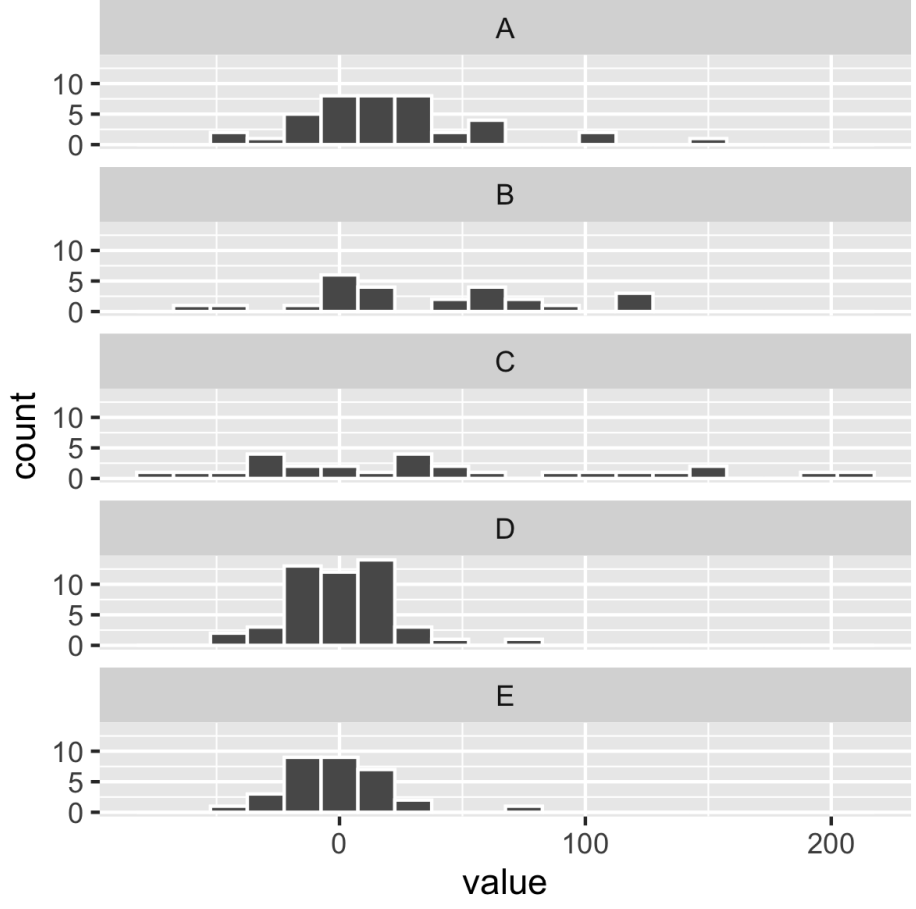
Lesson 3: Describing Quantitative Data: Shape

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 showing a different distribution of data. The x-axis for all histograms is labeled 'value' and ranges from -100 to 200, with major tick marks at -100, 0, 100, and 200. The y-axis for all histograms is labeled 'count' and ranges from 0 to 10, with major tick marks at 0, 5, and 10. Each histogram has a gray header bar with its label (A, B, C, D, or E) in the top right corner.</p> <ul style="list-style-type: none"> Histogram A: The distribution is centered around 0. The counts are approximately: -50: 2, -40: 1, -30: 5, -20: 8, -10: 8, 0: 8, 10: 8, 20: 2, 30: 4, 100: 2, 150: 1. Histogram B: The distribution is centered around 0. The counts are approximately: -50: 1, -40: 1, -30: 1, -20: 6, -10: 4, 0: 4, 10: 2, 20: 4, 30: 2, 40: 1, 100: 1, 150: 3. Histogram C: The distribution is centered around 0. The counts are approximately: -50: 1, -40: 1, -30: 1, -20: 4, -10: 2, 0: 2, 10: 2, 20: 4, 30: 2, 40: 1, 100: 1, 150: 1, 200: 1. Histogram D: The distribution is centered around 0. The counts are approximately: -50: 1, -40: 2, -30: 3, -20: 12, -10: 12, 0: 12, 10: 3, 20: 2, 30: 1, 40: 1, 100: 1. Histogram E: The distribution is centered around 0. The counts are approximately: -50: 1, -40: 2, -30: 3, -20: 9, -10: 9, 0: 7, 10: 2, 20: 1, 30: 1, 100: 1. 		
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.