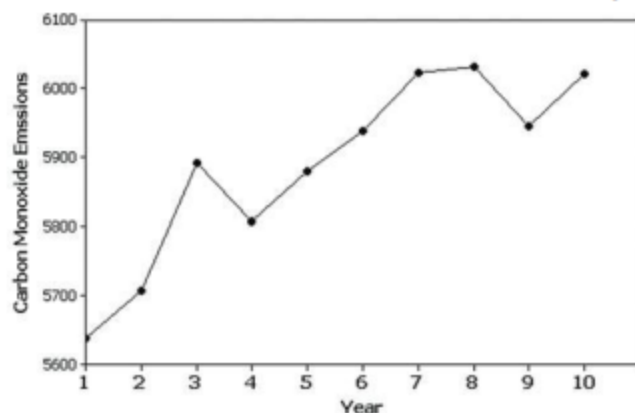4. The sample size is not large enough to reveal the true nature of the distribution of IQ scores for the population from which the sample is obtained.
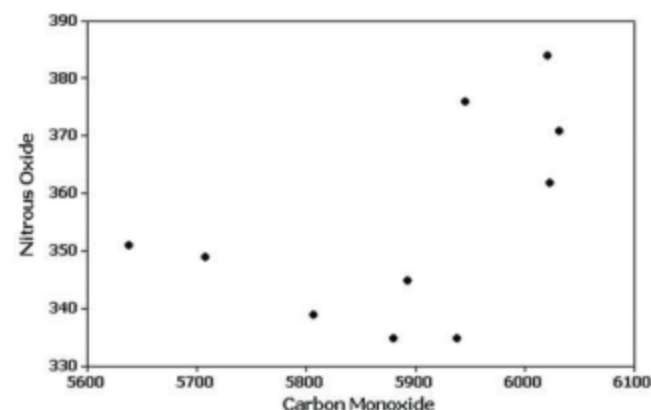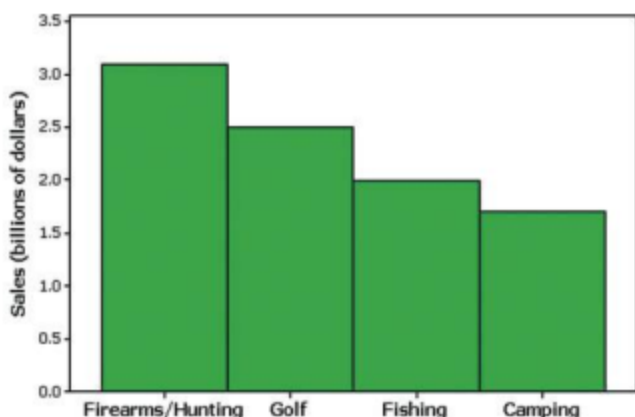
```
 8 | 779
 9 | 66
10 | 133
```

5. A time-series graph is best. It suggests that the amounts of carbon monoxide emissions in the United States are increasing.

6. A scatterplot is best. The scatterplot does not suggest that there is a relationship.
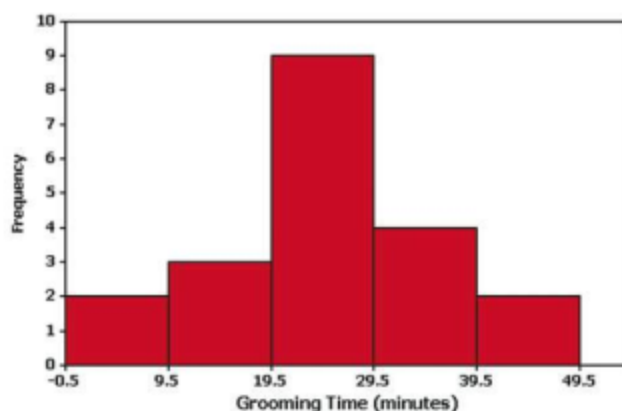

7. A Pareto chart is best.

Chapter 2: Cumulative Review Exercises

1. Pareto chart
2. Nominal, because the responses consist of names only. The responses do not measure or count anything, and they cannot be arranged in order according to some quantitative scale.
3. Voluntary response sample (or self-selected sample). The voluntary response sample is not likely to be representative of the population, because those with special interests or strong feelings about the topic are more likely than others to respond, and their views might be very different from those of the general population.
4. By using a vertical scale that does not begin at 0, the graph exaggerates the differences in the numbers of responses. The graph could be modified by starting the vertical scale at 0 instead of 50.
5. 37.6% chose the category of boss. Because it is based on a sample (not on the population), that percentage is a statistic.

6.

Grooming Time (min)	Frequency
0–9	2
10–19	3
20–29	9
30–39	4
40–49	2

7. Because the frequencies increase to a maximum and then decrease, and the left half of the histogram is roughly a mirror image of the right half, the data do appear to be from a population with a normal distribution.

8.

```
0 | 05
1 | 255
2 | 024555778
3 | 0055
4 | 05
```

Chapter 3: Answers

Section 3-2

1. No. The numbers do not measure or count anything, so the mean would be a meaningless statistic.
3. No. The price exactly in between the highest and lowest is the midrange, not the median.