Homework Questions for Chapter 1 " Using Graphs to Describe Data"

1.5. A random sample of tourists in China was asked a series of questions. Identify the type of data that is likely to be used in the answer of each question.

        a. What is your favorite tourist destination in China?

        b. How many days do you expect to be in China?

        c. Do you have children under the age of 10 travelling with you?

        d. Rank the following Chinese attractions in order from 1 (most favorite) to 5 (least favorite)

                Great Wall

                Forbidden City

                Terracotta Warriors

                Potala Palace

                Mogao Caves

1.10 A company has determined that there are seven possible defects for one of its product lines. Construct a Pareto diagram for the following defect frequencies:

Defect Code	Frequency
A	10
B	70
C	15
D	90
E	8
F	4
G	3

1.11 Bank clients were asked to indicate their level of satisfaction with the service provided by the bank's tellers. Responses from a random sample of customers were as follows: 69 were very satisfied, 55 were moderately satisfied, 5 had no opinion, 3 were moderately dissatisfied, and 2 were very dissatisfied.

        a. Draw a bar chart.

        b. Draw a pie chart.

1.31 Determine an appropriate interval width for a random sample of 110 observations that fall between and include the following:

    a. 20 to 85

    b. 30 to 190

    c. 40 to 230

    d. 140 to 500

1.32 Consider the following data:

17 28 39 39 40 59 12 62 51 41
32 21 13 54 15 24 35 36 44 44
64 65 65 15 37 37 56 59

a. Construct a frequency distribution.
b. Draw a histogram.
c. Draw an ogive.
d. Draw a stem-and-leaf display

1.34 Consider the following frequency distribution:

Class	Frequency
0 < 10	8
10 < 20	10
20 < 30	13
30 < 40	12
40 < 50	6

a. Construct a relative frequency distribution.
b. Construct a cumulative frequency distribution.
c. Construct a cumulative relative frequency distribution.

1.44 Beijing Books offers discounted books online priced at either $3, $5, or $10. The owner wants to know whether the price has any relationship with the number of days it takes for a customer to decide on a purchase. The following data shows the price (X) and the number of days the book was on sale before it was sold (Y). The data is shown (X, Y) in pairs:

(3, 7) (5, 5) (10, 2) (3, 9) (5, 6) (10, 5) (3, 6)

(5, 6) (10, 1) (3, 10) (5, 7) (10, 4) (3, 5) (5, 6) (10, 4)

Prepare a scatter plot of the points and comment on the relationship between the price and the time taken to sell.