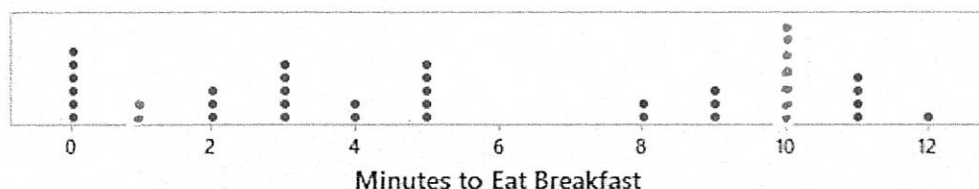


§2.3 (Part 1): Displaying Numerical Data

- 1.] A survey of "How long does it take you to eat breakfast?" has these results:

Minutes:	0	1	2	3	4	5	6	7	8	9	10	11	12
People:	6	2	3	5	2	5	0	0	2	3	7	4	1

That is, 6 people believe that it takes 0 minutes to eat breakfast. A partially completed dotplot of these data is below. Finish it off.



- 2.] Credit card fraud is a growing problem for both consumers and merchants. The data below on the percentage of credit card holders who have been impacted by fraud between 2009 and 2014 for 20 countries appeared in an article on cardhub.com. Create two stem-and-leaf plot to display these data: one with four stems and one with 8 stems. Do any countries stand out for having unusually high or unusually low percentages?

Country	Cardholders Affected (%)
Australia	27
Brazil	27
Canada	18
China	31
France	24
Germany	14
India	32
Indonesia	13
Italy	16
Mexico	28
New Zealand	15
Poland	15
Russia	19
Singapore	25
South Africa	25
Sweden	8 x
The Netherlands	10 x
United Arab Emirates	39
United Kingdom	25
United States	36

0 | 8
 1 | 0 3 4 5 5 6 8 9
 2 | 4 5 5 5 7 7 8
 3 | 1 2 6 9

Stems: tens
 Leaves: ones

1 | 5 \Rightarrow 15

Repeating Stems:

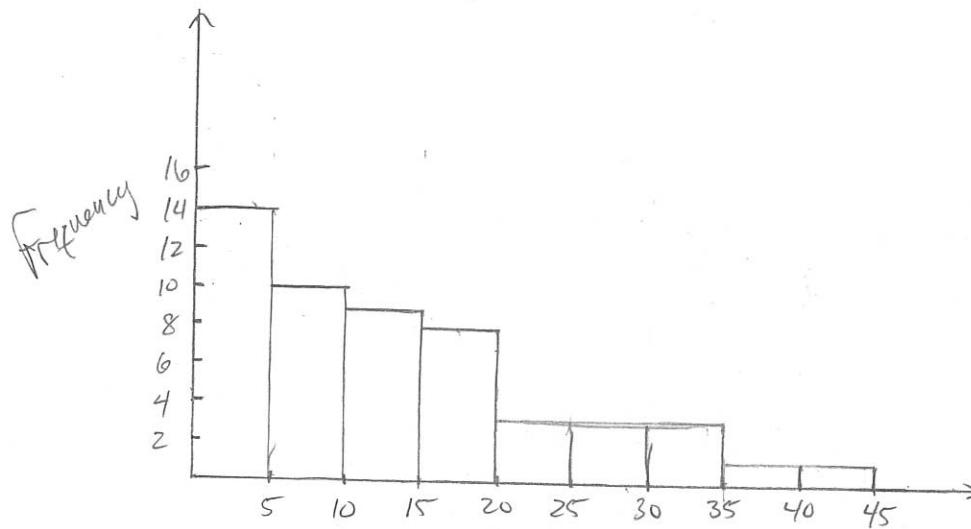
0 | 8
 0 | 8
 1 | 0 3 4
 1 | 5 5 6 8 9
 2 | 4
 2 | 5 5 5 7 7 8
 3 | 1 2
 3 | 6 9

- 3.] In the Super Bowl, by how many points does the winning team outscore the losers? Here are the winning margins for the first 52 Super Bowl games (in order):

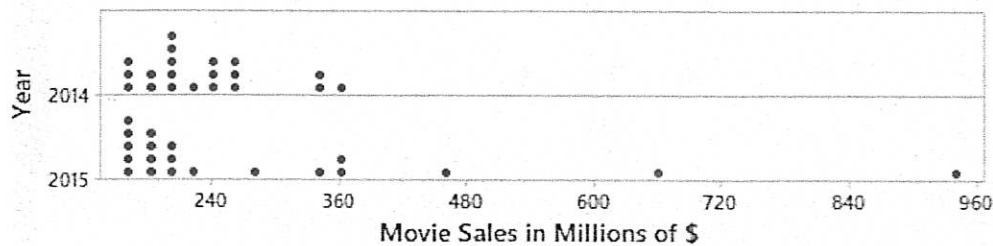
1	3	3	3	3	3	3	4	4	4	4	4	4
5	6	6	7	7	7	8	9	10	10	10	11	12
12	13	14	14	14	15	15	16	17	17	17	17	18
19	19	21	22	23	27	27	29	31	32	35	36	45

Make a Histogram of these data with 9 intervals, indicating the midpoint for each interval on the display.

Bin	Frequency
(0,5]	14
(5,10]	10
(10,15]	9
(15,20]	8
(20,25]	3
(25,30]	3
(30,35]	3
(35,40]	1
(40,45]	1



- 4.] Box Office Mojo tracks movie ticket sales. Ticket Sales (in millions of dollars) for each of the top 20 movies in 2014 and 2015 are shown in the dotplot below. (Actual data is on page 79 of the text.)



In what ways are the distributions of the 2014 and 2015 ticket sales similar? In what ways are they different?

- They are similar in the sense that most data are concentrated around the 240 million area.
- They're different because there are clear outliers in 2015, one at around 960 million and another at around 660 million.