Chapter Review

1. For problems 1a–1d, choose Yes or No to indicate whether the survey question or observation is good.

   1a.   What are the heights of the trees in the park?   ○ Yes   ○ No

   1b.   How old are the trees in the park?   ○ Yes   ○ No

   1c.   How tall is the cypress tree on the north side of the lake this morning?   ○ Yes   ○ No

   1d.   Which is the prettiest tree in the park?   ○ Yes   ○ No

2. A builder is buying property to build new houses. The sizes of the lots are $\frac{1}{6}, \frac{1}{2}, \frac{1}{3}, \frac{1}{2}, \frac{1}{6}, \frac{1}{2}, \frac{1}{2}, \frac{1}{3}, \frac{1}{6}, \frac{1}{2}, \frac{1}{6}, \frac{1}{2}, \frac{1}{6}, \frac{1}{6},$ and $\frac{1}{3}$ acre. Organize the information in a line plot.

   What is the average size of the lots?

   _____ acre

3. For 6 days in a row, Julia measured the depth of the snow in a shaded area of her backyard. The line graph shows her data. Between which two days did the depth of the snow decrease the most?

Snow Depth
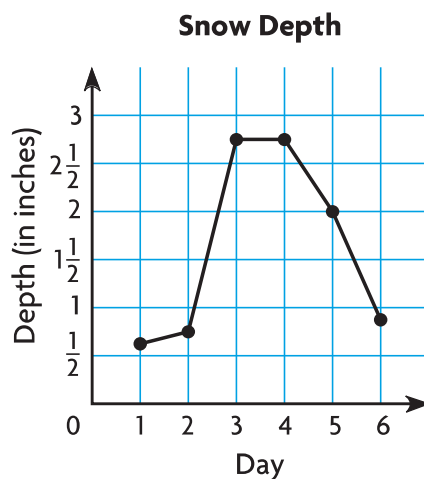
between Day ☐ and Day ☐

4. Mr. Jones gave a quiz to his math class. The students' scores are listed in the table. Make a line plot of the data.

Math Test Scores				
100	90	40	70	70
90	80	50	70	60
90	70	60	80	100
70	50	80	90	90
80	70	80	90	70

```
  +-----+-----+-----+-----+-----+-----+-----+
 40    50    60    70    80    90   100
```

Math Test Scores
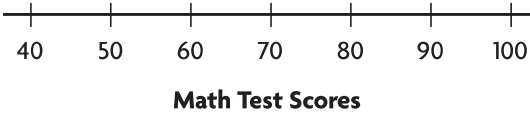
5. Melanie scored 10, 10, 11, and 13 points in her last 4 basketball games.

The mean of the test points scored is
```
┌──────┐
│  10  │
│  11  │
│  13  │
└──────┘
```
.

The median of the test points scored is
```
┌──────┐
│  10  │
│ 10.5 │
│  11  │
└──────┘
```
.

The mode of the test points scored is
```
┌─────────┐
│   10    │
│   11    │
│ no mode │
└─────────┘
```
.

6. The frequency table shows the height, in inches, of basketball players. What fraction of the players are 70 inches or taller?

Heights of Basketball Players	
Inches	Frequency
60–69	III
70–79	LHI I
80–89	III

7. The Martin family goes out for frozen yogurt to celebrate the last day of school. The costs of their frozen yogurts are $1, $1, $2, and $4. For problems 7a–7d, select True or False for each statement.

7a.   The mean cost for the frozen   ○ True   ○ False
      yogurts can be found by adding
      each cost and dividing that total by 4.

7b.   The mean cost of the four frozen   ○ True   ○ False
      yogurts is $2.

7c.   The difference between the   ○ True   ○ False
      greatest cost and the mean is $1.

7d.   The difference between the least   ○ True   ○ False
      cost and the mean is $1.

8. The data set shows the total number of sandwiches sold each day for 28 days. What is the most common number of sandwiches sold in a day?

Number of sandwiches sold each day						
10	14	11	12	19	13	24
12	12	18	9	17	15	20
20	21	10	13	13	16	19
21	22	18	13	15	14	10

9. Michael's teacher asks, "How many items were sold on the first day of the fundraiser?" Explain why this is not a good survey question.

10. Each week, Maria measures the amount of rainfall at her home. The line graph shows the amount of rainfall for the first 5 weeks of the year.

Rainfall

For problems 10a–10b, select True or False for each statement.

10a. The amount of rainfall increased from $\frac{1}{2}$ to 3 inches over the 5-week period.　　○ True　　○ False

**10b.** The greatest increase in rainfall occurred from Week 1 to Week 2.　　○ True　　○ False
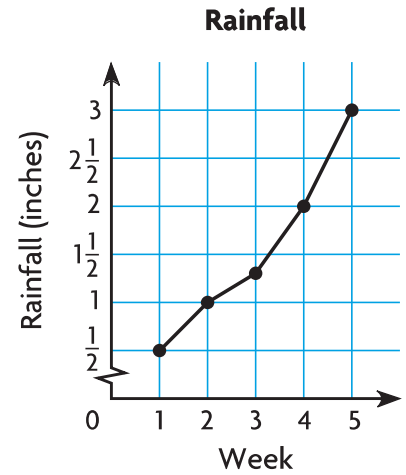
11. The line plot shows the weights of bags of beans. What is the average weight of the bags? Show your work.

Weights of Bags of Beans (in lb)

12. The dot plot shows how many games of chess 9 different members of the chess club played in one month. What is the median number of games of chess played? Explain how the line plot helped you find the answer.
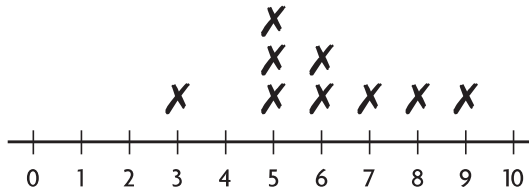
Number of Games Played in One Month

13. Larry is training for a bicycle race. He records how far he rides each day. Next week Larry plans to ride the same total number of miles. However, he wants to ride the same number of miles each day. How many miles will he ride each day?

| Miles Larry Rides each Day					
Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
17	14	13	16	15	15

14. Randy is training for a race. She makes a table that shows how long it takes her to run different distances.

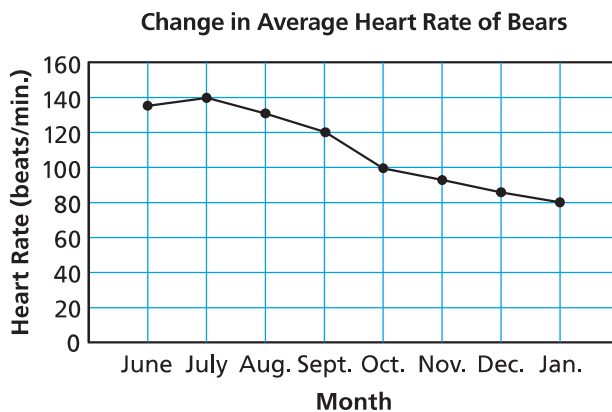| Running Time and Distance				
Distance (in miles)	1	2	4	6
Time (in hours)	0.2	0.5	0.9	1.4

14a. What scale and interval would be appropriate to graph the data?

14b. Write the related pairs as ordered pairs.

14c. Make a line graph of the data.

Time (in hours)

Distance (in miles)
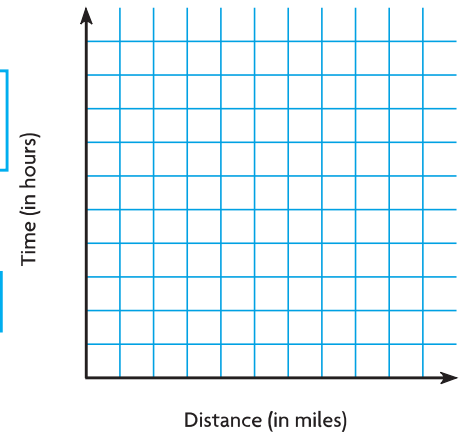
15. A scientist made a line graph that shows how a bear's average heart rate changes over time.

Change in Average Heart Rate of Bears

Heart Rate (beats/min.)

160
140
120
100
80
60
40
20
0

June July Aug. Sept. Oct. Nov. Dec. Jan.

Month

For problems 15a–15c, select True or False for each statement.

15a. The bear's average heart rate is at its highest in July. ○ True   ○ False

15b. The bear's average heart rate increases by 10 beats per minute from July to August. ○ True   ○ False

15c. The bear's average heart rate is at its lowest in January. ○ True   ○ False

16. The band director kept a record of the number of concert tickets sold by band members. Complete the frequency table of the data. How many people sold tickets?

Number of Concert Tickets Sold

4	6	6	7	7
8	8	9	9	9
8	8	10	4	10

Number of Concert Tickets Sold

Number of Tickets Sold	Frequency
4			
5	0
6	
7	
8	
9	
10	

_____ people sold tickets.

17. Five friends have 8, 6, 5, 2, and 4 baseball cards to divide equally among themselves.

Each friend will get
| 4 |
| 5 |
| 6 |
cards.

18. The data set shows the ages of the members of the cheerleading squad. What is the range of ages of the members of the squad? Explain how to find the answer using a line plot.

Ages of Cheerleaders (years)

8	11	13	12	14
12	10	11	9	11

7 8 9 10 11 12 13 14 15