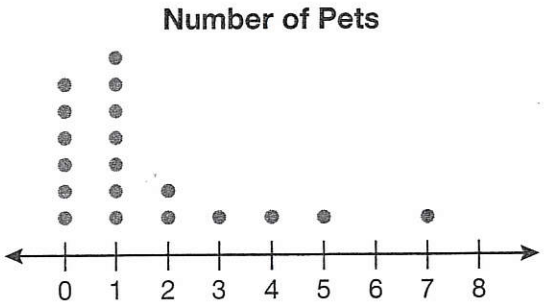
Lesson 23 – Analyzing Data Answers

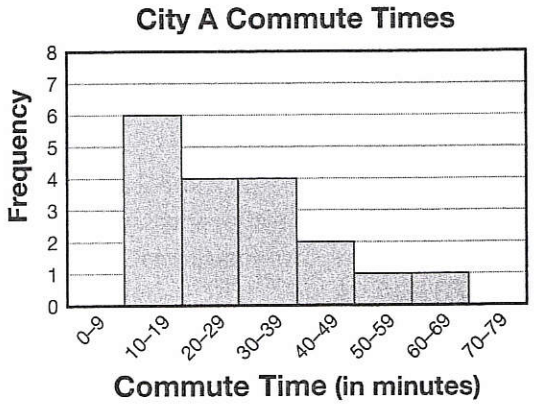
1. B
2. D
3. B
4. A
5. B
6. C
7. A
8. Part A

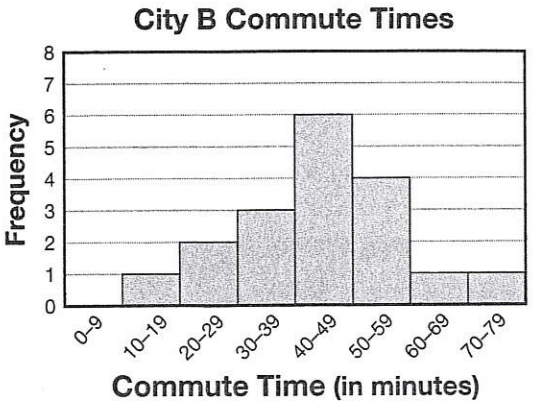


Part B skewed right; Sample answer: Most of the data is on the left of the dot plot, but there is a tail of data to the right.

9. The Prices Paid for Shoes, Shopping Center histogram shows a uniform distribution. The Prices Paid for Shoes, Department Store shows a skewed left distribution. Sample answer: At a shopping center, there are different types of stores, so there are shoes available at various prices. At a department store, items tend to be more expensive, so most shoes are relatively expensive, and a few pairs are less expensive.

10. C, E
11. Part A





Part B

Sample answer: The City A histogram is skewed right, and the City B histogram is approximately normally distributed. City A might be a smaller city, so more people live closer to work than in City B. In City B, there might not be very much housing near the office, so people have to commute farther.

12. Part A Sample answer: I would choose intervals of 5 hours. The data ranges from 0 to 42.5, so this would give 9 intervals, which is a good compromise between summarizing the data and showing detail.

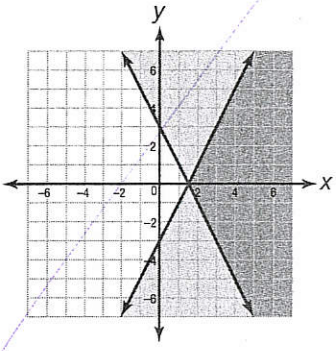
Part B Sample answer:

Interval	Data Elements	Frequency
0–4.9	0, 3.5	2
5–9.9	8.5, 5.5, 9.5	3
10–14.9	14, 11.5, 14, 13.5, 12.5	5
15–19.9	15, 17.5, 18.5, 17, 19, 18.5, 16.5, 15.5	8
20–24.9	22.5, 20.5, 22, 23.5, 21.5, 23	6
25–29.9	27.5, 26, 29	3
30–34.9	31.5, 32.5	2
35–39.9		0
40–44.9	42.5	1

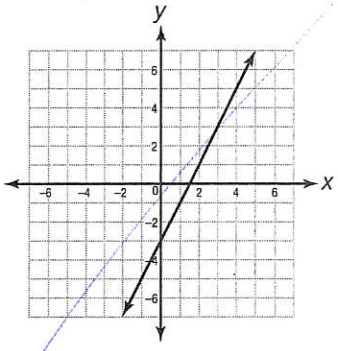
For remaining answers, see page LP5.

LESSON 16

16. Part A



Part B

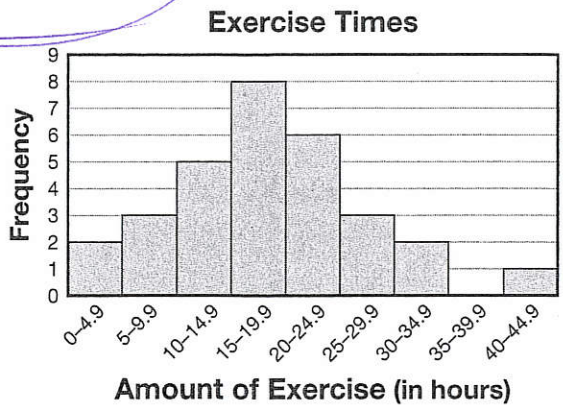


Part C $b > -3$. Sample answer: If $m = 2$, then the line $y = 2x + b$ is parallel to the line $2x - y = 3$. The first inequality represents all points on and above $y = 2x + b$, and the second inequality represents all points on and below the line $y = 2x - 3$. If $b = -3$, then the only points in common are on the line $y = 2x - 3$, so there is a solution. If $b < -3$, then the solution is the set of points between the parallel lines. If $b > -3$, then there is no solution, because the line $y = 2x + b$ is above the line $2x - y = 3$.

DOK3

Unit 3

LESSON 23



Part C Sample answer: The data is normally distributed, with the largest group of people exercising between 15 and 19.9 hours.

Part D Sample answer: The number of hours that people watch TV in a month might have a similar distribution. Most people watch a moderate amount, but some people watch TV many hours, and some very little or not at all.

DOK3

LESSON 25

Part B

$$s = \sqrt{\frac{((7-9)^2 + (8-9)^2 + (9-9)^2 + (12-9)^2)}{4-1}} =$$

$$\sqrt{\frac{4+1+0+9}{3}} = \sqrt{\frac{14}{3}} \approx 2.2$$

DOK2

11. No; Sample answer: The mean changes by the constant in the same way that the data elements change, so the deviations from the mean are the same. Since the number of data elements does not change, the standard deviation is also the same. DOK3