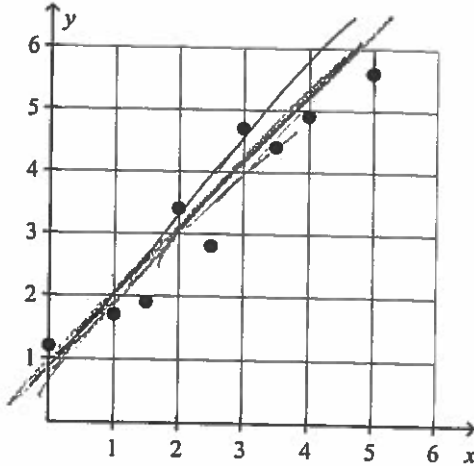


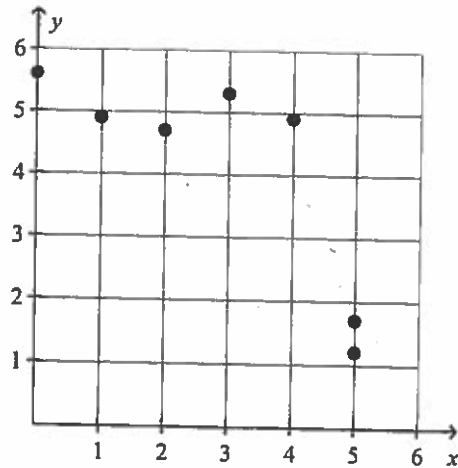
Chapter B Practice Test

1. Which of the scatter plots shows a negative correlation?

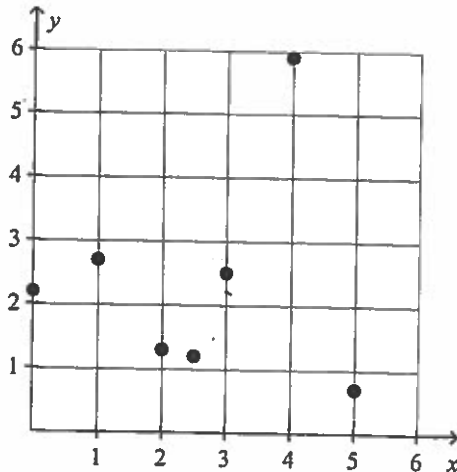
a.



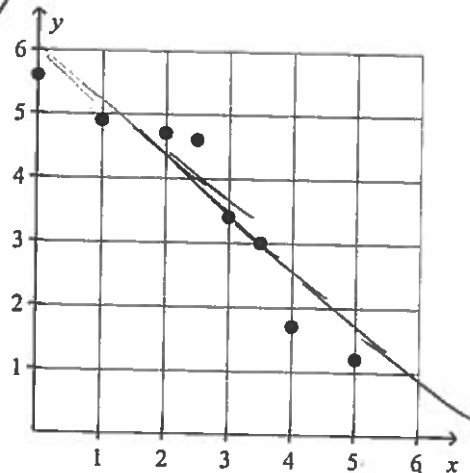
c.



b.



d.



2. You toss a coin and roll a number cube. Find $P(\text{heads and an odd number})$.

$$\left(\frac{1}{2}\right)\left(\frac{3}{6}\right) = \frac{3}{12} \text{ or } \frac{1}{4}$$

3. Suppose you choose a marble from a bag containing 2 red marbles, 2 white marbles, and 3 blue marbles. You return the first marble to the bag and then choose again. Find $P(\text{red and blue})$.

$$\left(\frac{2}{7}\right)\left(\frac{3}{7}\right) = \frac{6}{49}$$

4. In a word game, you choose a tile from a bag, replace it, and then choose another. If there are 24 vowels and 15 consonants, what is the probability you will choose a consonant and then a vowel?

$$\left(\frac{15}{39}\right)\left(\frac{24}{39}\right) = \frac{360}{1521} \text{ or } \frac{40}{169}$$

5. Are the two events dependent or independent? Explain.

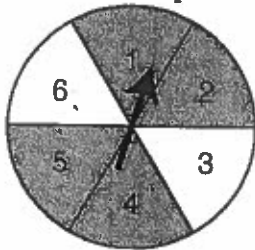
a. Toss a dime, and then toss a quarter.

independent - don't affect each other

b. Pick a card from a deck of cards. Keep the card and pick another.

dependent - affect each other

Refer to the spinner below.



6. Find $P(\text{even and shaded})$.

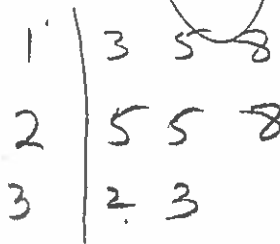
$$\left(\frac{3}{6}\right)\left(\frac{4}{6}\right) = \frac{12}{36} = \frac{1}{3}$$

7. Find the odds of the spinner landing on a light section.

2:4 or 1:2

8. Make a stem-and-leaf plot for the following set of data.

1.3, 1.5, 1.8, 2.5, 2.5, 2.8, 3.2, 3.3



$$1|3 = 1.3$$

1 2 (3) 4 5

9. Find the mean, median, mode, and range.

Mean: 24 Median: 25.5 Mode: none Range: 25

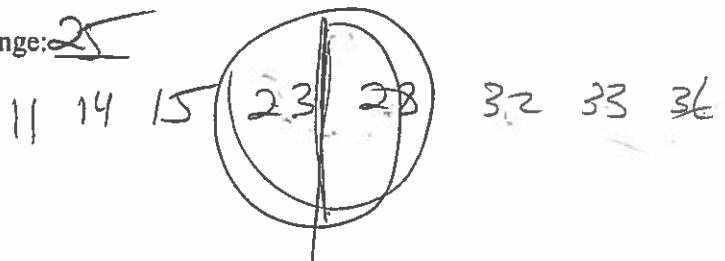
~~28 15 33 36 14 11 32 23~~

$$\text{Mean: } \frac{192}{8} = 24$$

$$\text{Median: } \frac{51}{2} = 25.5$$

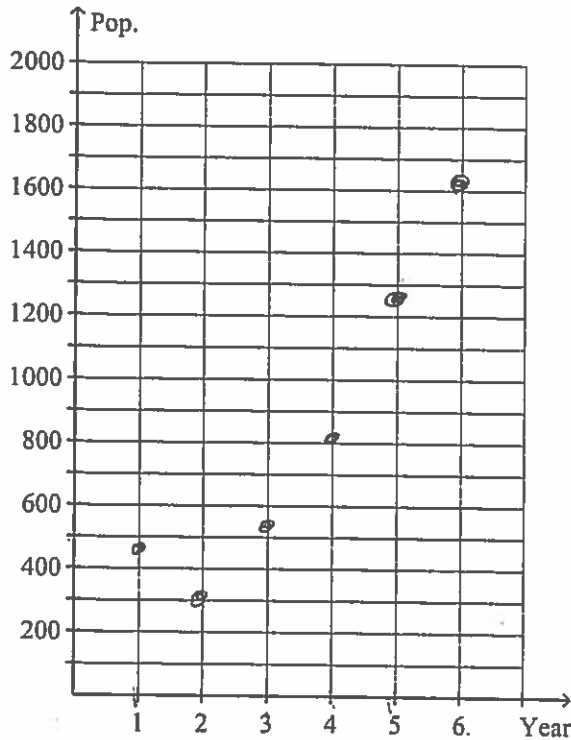
Mode: none

$$\text{Range: } 36 - 11 = 25$$



10. The population of an endangered animal species has been increasing. Make a scatter plot using the data given in the table.

Year	Population
1	480
2	310
3	520
4	810
5	1250
6	1610



11. A cell phone company orders 700 new phones from a manufacturer. If the probability of a phone being defective is 2.4%, predict how many of the phones are likely to be defective. Round to the nearest whole number.

$$(0.024)(700) = 16.8 \approx 17 \text{ phones}$$

12. You have three \$1 bills, four \$5 bills, and two \$10 bills in your wallet. You select a bill at random. Without replacing the bill, you choose a second bill at random. Find $P(\$10 \text{ then } \$1)$.

9 total bills

$$\left(\frac{2}{9}\right)\left(\frac{3}{8}\right) = \frac{6}{72} = \frac{1}{12}$$

13. Your math teacher allows you to choose the most favorable measure of central tendency (mean, median, or mode) of your test scores to determine your grade for the term. On six tests you earn scores of ~~76, 74, 89, 79, 88, and 89~~. What is your grade to the nearest whole number, and which measure of central tendency ~~should~~ did you choose?

Mean: $\frac{495}{6} = 82.5$ 74 76 79 | 88 89 89
 Median: $\frac{169}{2} = 83.5$ Mode = 89 Weight

14. A basket contains 11 pieces of fruit: 7 apples, 2 oranges, and 2 bananas. Jonas takes a piece of fruit at random from the basket, and then Beth takes a piece at random. What is the probability that Jonas will get an orange and Beth will get an apple? (~~this is a without replacement situation~~)

$\left(\frac{2}{11}\right)\left(\frac{7}{10}\right) = \frac{14}{110}$ or $\frac{7}{55}$

15. Over the first five years of owning her car, Gina drove about 12,300 miles the first year, 16,300 miles the second year, 12,700 the third year, 10,800 the fourth year, and 12,825 the fifth year.

a. Find the mean, median, and mode of this data. 10,800 12,300 12,700 12,825 16,300

Mean: $\frac{12,985}{5}$ Median: 12,700 Mode: none

- b. Explain which measure of central tendency (mean or median) will best predict how many miles Gina will drive in the sixth year.

mean - there's no outlier

16. You roll a standard number cube. Find $P(\text{number greater than 1})$

$\frac{5}{6}$

17. You have the numbers 1-24 written on slips of paper. If you choose one slip at random, what is the probability that you will *not* select a number which is divisible by 3? 3 6 9 12 15 18 21 24

$\frac{16}{24}$ or $\frac{2}{3}$

18. In a batch of 960 calculators, 8 were found to be defective. What is the probability that a calculator chosen at random will be defective? Write the probability as a percent. Round to the nearest tenth of a percent if necessary.

$\frac{8}{960} = 0.00833 = 0.8\%$

19. You toss a coin and roll a number cube. Find $P(\text{heads and an even number})$.

$\left(\frac{1}{2}\right)\left(\frac{3}{6}\right) = \frac{3}{12} = \frac{1}{4}$