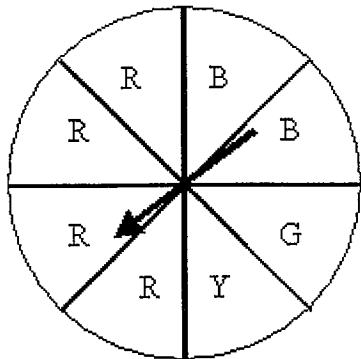


Algebra 2 Probability and Data Displays Practice Test

A game involves spinning this spinner.



1. (1 point)
 What is the probability of the pointer landing on G?
 a. $\frac{1}{8}$ b. $\frac{5}{8}$ c. $\frac{1}{2}$ d. $\frac{3}{8}$

2. (1 point)
 Predict how many times the spinner will stop on Y in 136 spins.
 a. 17 times b. 16 times c. 19 times d. 22 times

3. (1 point)
 The table shows the drink preferences of 50 shoppers at the mall. What is the probability that one shopper, selected at random from the 50 surveyed, preferred either Drink B or Drink A?

Drink Survey

Drink	Number of Shoppers
A	7
B	8
C	10
D	11
E	14

- a. $\frac{8}{25}$ b. $\frac{3}{10}$ c. $\frac{11}{25}$ d. $\frac{7}{25}$

4. (1 point)
 A standard number cube with the numbers 1 through 6 is rolled. Find the probability of rolling a number greater than 4.
 a. $\frac{1}{6}$ b. $\frac{1}{3}$ c. $\frac{5}{6}$ d. $\frac{2}{3}$

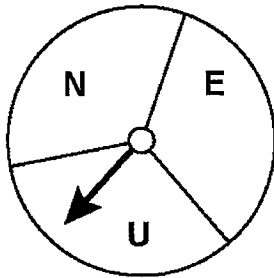
5. (1 point)

A number cube is rolled 360 times and the results are recorded as follows: 41 ones, 54 twos, 62 threes, 75 fours, 33 fives, and 95 sixes. What is the experimental probability of rolling a two or a three?

- a. 0.32 b. 0.18 c. 0.07 d. 0.68

6. (1 point)

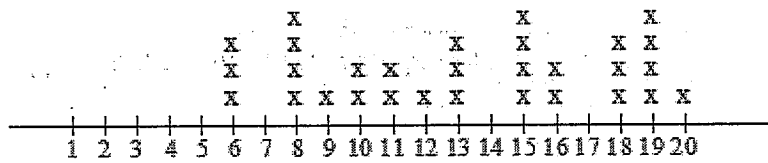
The spinner is divided into equal parts. Use a tree diagram to find the probability that the spinner will land on a vowel both times, if the spinner is spun twice.



- a. $\frac{4}{9}$ b. $\frac{2}{3}$ c. $\frac{7}{9}$ d. $\frac{1}{3}$

7. (1 point)

The line plot below represents the number of letters written to overseas pen pals by the students at Waverly Middle School. Each "x" represents 10 students. How many students wrote 7 or more letters?

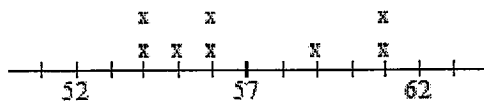


- a. 0 b. 270 c. 30 d. 27

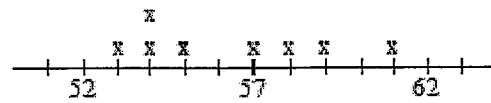
8. (1 point)

The numbers below represent the scores on a science test. Graph the data in a line plot.
58, 55, 54, 61, 56, 54, 61, 55, 53, 54

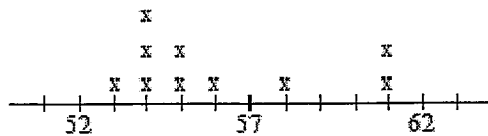
a.



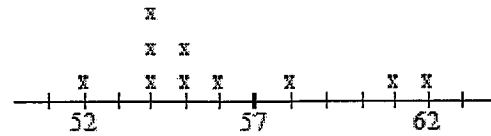
c.



b.



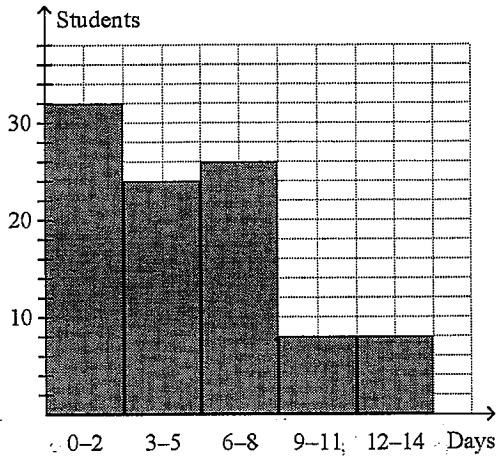
d.



9. (1 point)

The histogram shows the number of sick days students took during the school year. How many more students were out sick for 0 to 2 days than 10 to 12 days?

How Many Sick Days Did Students Take During the School Year?



a. 24

b. 8

c. 28

d. 20

10. (1 point)

The stem-and-leaf plot shows the number of cans of food collected by various students for a food drive. How many students collected more than 43 cans?

Stem	Leaves
3	0 1 1 1 4 4 4
4	0 1 3 4 4 5
5	0 3 3 6 8

key: 3 | 5 means 35

a. 8

b. 5

c. 7

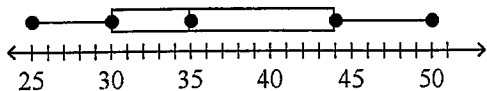
d. 9

11. (1 point)

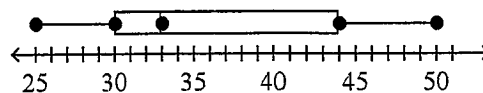
The following list shows the number of gift baskets that Ms. Ruff sold at her kiosk in the mall each day for 15 days. Make a box-and-whisker plot of the data.

49, 35, 32, 46, 39, 29, 50, 33, 36, 30, 25, 29, 44, 33, 44

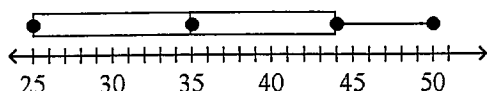
a.



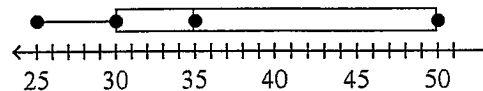
c.



b.



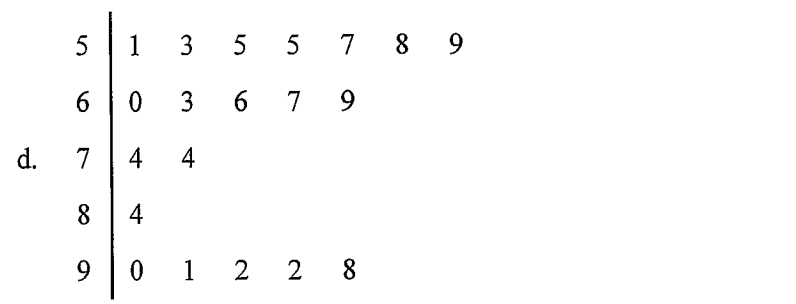
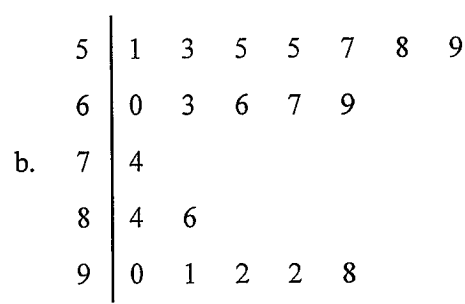
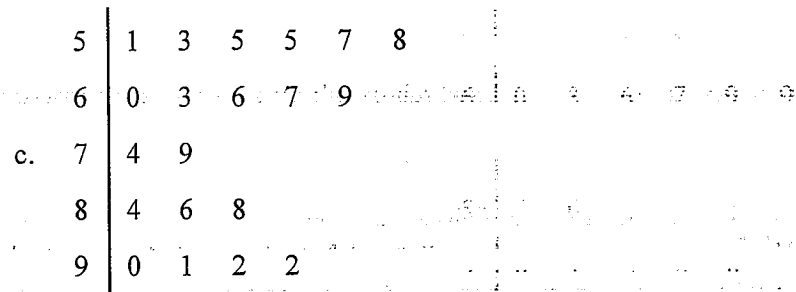
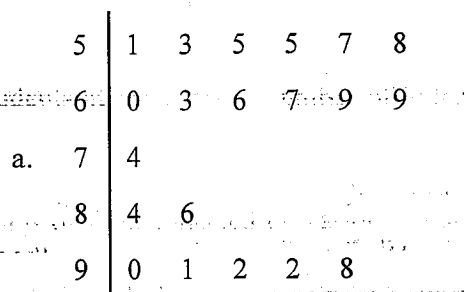
d.



12. (1 point)

The list shows the final exam grades for Ms. Gold's math class. Make a stem-and-leaf plot for the data.

66, 98, 92, 91, 69, 55, 53, 90, 67, 74, 57, 58, 60, 59, 86, 92, 63, 55, 51, 84



You mix the letters S, E, L, E, C, T, E, and D thoroughly. Without looking, you draw one letter. Find the probability of each event as a fraction, a decimal, and a percent.

13. (1 point)

$P(\text{not E})$

a. $\frac{3}{8}$; 0.375; 37.5%

c. $\frac{5}{8}$; 0.625; 62.5%

b. $\frac{8}{5}$; 1.6; 16%

d. $\frac{8}{3}$; 2.667; 26.667%

14. (1 point)

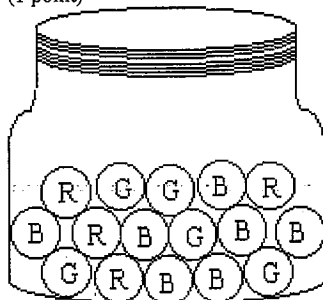
Coin Toss Results

H = Heads T = Tails							
T	H	T	H	T	H	T	T
T	H	T	H	T	T		

Find the experimental probability of tossing heads.

- a. $\frac{5}{8}$ b. $\frac{1}{3}$ c. $\frac{2}{3}$ d. 2

15. (1 point)



Key:
 (R) = Red Marble
 (B) = Blue Marble
 (G) = Green Marble

The diagram shows the contents of a jar of marbles. You select two marbles at random. One marble is drawn and not replaced. Then a second marble is drawn. What is the probability of selecting a red marble and then another red marble?

- a. $\frac{3^2}{64}$ b. $\frac{1}{4}$ c. $\frac{1}{20}$ d. $\frac{1}{30}$

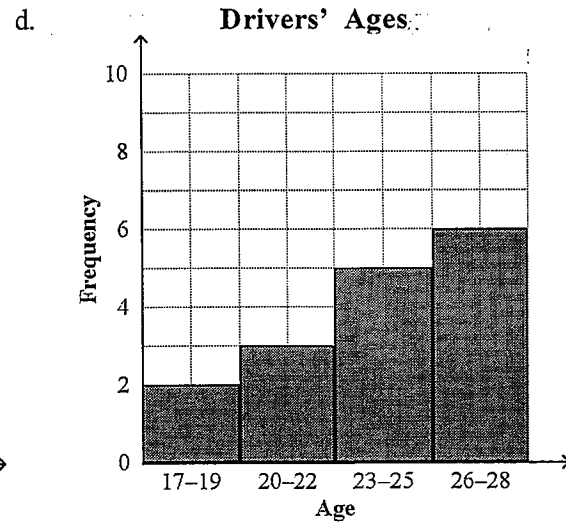
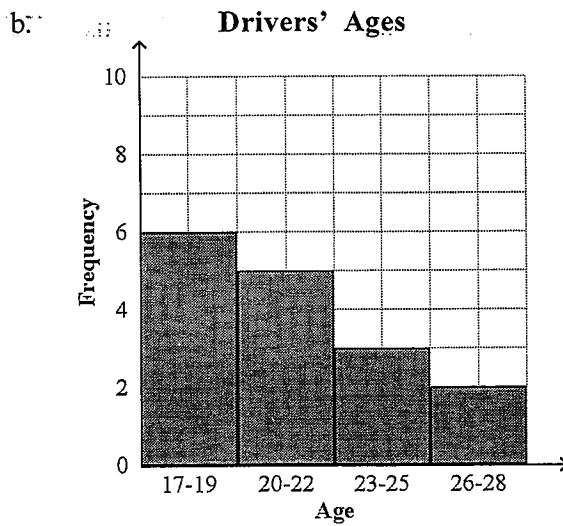
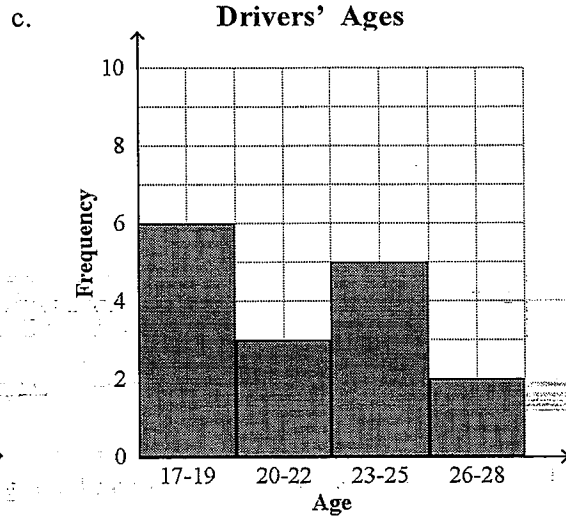
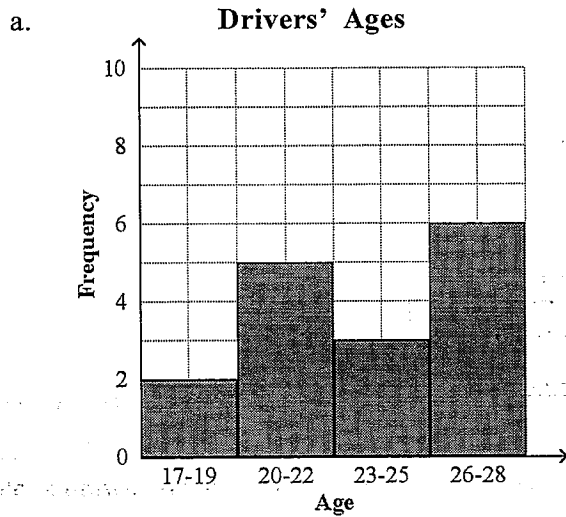
Name: _____

ID: A

16. (1 point)

Make a histogram for drivers' ages using the data from the table below.

Age	Frequency
17-19	2
20-22	3
23-25	5
26-28	6



17. (1 point)

The back-to-back stem-and-leaf plot below shows the ages of patients seen by two doctors in a family clinic one day. What is the difference between the age of the oldest patient seen by Doctor 1 and the age of the oldest patient seen by Doctor 2?

Ages of Doctor's Patients

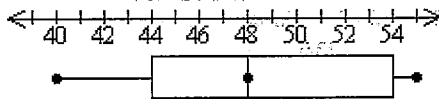
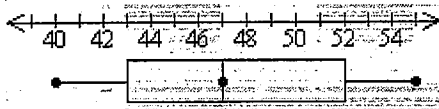
Doctor 1		Doctor 2
	3	5
9 2 0	2	0 0 2 3 6
8 7 5	1	3 7
9 7 3 2 1 1	0	2 2 3 9

Key: means $29 \leftarrow 9 \mid 2 \mid 3 \rightarrow$ means 23

- a. 34 years b. 1 year c. 6 years d. 27 years

18. (1 point)

Use the two box-and-whisker plots shown below to determine which of the following statements is true.



- a. The lower quartiles are equal.
 b. The upper quartiles are equal.
 c. They both have the same median.
 d. The range is the same for both sets of data.

Decide whether the probability is *experimental* or *theoretical*. Explain.

19. (1 point)

You toss a coin 15 times. $P(\text{heads}) = \frac{2}{5}$.

- a. Experimental; the result is found by repeating an experiment.
 b. Experimental; the result is based on the number of possible outcomes.
 c. Theoretical; the result is found by repeating an experiment.
 d. Theoretical; the result is based on the number of possible outcomes.

Name: _____

ID: A

Write your answer as a fraction in simplest form.

20. (1 point)

You select 29 marbles from a bag. The results are as follows: 5 blue marbles, 6 green marbles, 7 red marbles, 8 white marbles, and 3 yellow marbles. Find $P(\text{not blue})$.

a. $\frac{5}{24}$

b. $\frac{5}{29}$

c. $\frac{29}{24}$

d. $\frac{24}{29}$

21. (1 point)

Suppose Q and R are independent events. Find $P(Q \text{ and } R)$.

$P(Q) = 0.41$, $P(R) = 0.44$

a. 0.03

b. 0.1804

c. 0.85

d. 0.0123

Algebra 2 Probability and Data Displays Practice Test

Answer Section

1. ANS: A	PTS: 1	DOK: DOK 1
2. ANS: A	PTS: 1	DOK: DOK 1
3. ANS: B	PTS: 1	DOK: DOK 1
4. ANS: B	PTS: 1	DOK: DOK 1
5. ANS: A	PTS: 1	DOK: DOK 1
6. ANS: A	PTS: 1	DOK: DOK 2
7. ANS: B	PTS: 1	DOK: DOK 1
8. ANS: B	PTS: 1	DOK: DOK 1
9. ANS: A	PTS: 1	DOK: DOK 1
10. ANS: A	PTS: 1	DOK: DOK 1
11. ANS: A	PTS: 1	DOK: DOK 1
12. ANS: B	PTS: 1	DOK: DOK 1
13. ANS: C	PTS: 1	DOK: DOK 2
14. ANS: B	PTS: 1	DOK: DOK 1
15. ANS: C	PTS: 1	DOK: DOK 1
16. ANS: D	PTS: 1	DOK: DOK 1
17. ANS: C	PTS: 1	DOK: DOK 2
18. ANS: D	PTS: 1	DOK: DOK 1
19. ANS: A	PTS: 1	DOK: DOK 1
20. ANS: D	PTS: 1	DOK: DOK 1
21. ANS: B	PTS: 1	DOK: DOK 1

15. ANS: C	PTS: 1
16. ANS: B	PTS: 1
17. ANS: C	PTS: 1
18. ANS: D	PTS: 1
19. ANS: A	PTS: 1
20. ANS: D	PTS: 1
21. ANS: B	PTS: 1