

Name _____ Class _____ Date _____

SELECTED RESPONSE

1. You roll a standard number cube once. Which of the following gives all of the outcomes of the sample space for this experiment?
- A. 1, 2, 3
 - B. A, B, C, D
 - C. 1, 2, 3, 4, 5, 6
 - D. 2, 4, 6, 8, 10
- A hat contains 5 red balls, 8 green balls, and 9 yellow balls. Rina chooses one ball at random from the hat. Use this information for 2-5.** 22 pts
2. What is the probability that Rina chooses a green ball?
- | | |
|--|-------------------|
| F. $\frac{1}{11}$ | H. $\frac{9}{22}$ |
| <input checked="" type="radio"/> G. $\frac{4}{11}$ | J. $\frac{5}{11}$ |
3. What is the probability that Rina chooses a red ball or a green ball?
- | | |
|---|--------------------|
| <input checked="" type="radio"/> A. $\frac{13}{22}$ | C. $\frac{17}{22}$ |
| B. $\frac{7}{11}$ | D. $\frac{40}{22}$ |
4. What is the probability that Rina does **not** choose a red ball?
- | | |
|-------------------|---|
| F. $\frac{5}{22}$ | H. $\frac{13}{22}$ |
| G. $\frac{4}{11}$ | <input checked="" type="radio"/> J. $\frac{17}{22}$ |
5. What is the probability that Rina chooses a yellow ball?
- | | |
|--|--------------------|
| A. $\frac{7}{22}$ | C. $\frac{13}{22}$ |
| <input checked="" type="radio"/> B. $\frac{9}{22}$ | D. $\frac{17}{22}$ |
6. A standard number cube is rolled once. What is the probability that a number less than 3 is rolled?
- | | |
|---|------------------|
| F. $\frac{1}{6}$ | H. $\frac{1}{2}$ |
| <input checked="" type="radio"/> G. $\frac{1}{3}$ | J. $\frac{2}{3}$ |
7. A spinner has white, green, violet, indigo, and blue sections. Which of the following is the complement of the event that the spinner lands on violet?
- A. The spinner lands on green.
 - B. The spinner lands on white, green, or indigo.
 - C. The spinner lands on white, green, indigo, or blue.
 - D. The spinner does not land on blue.
8. The probability that a new car at a local dealership has a bad headlight is 0.003. Which statement best describes the probability of this event?
- F. It is likely that a new car at a local dealership has a bad headlight.
 - G. It is unlikely that a new car at a local dealership has a bad headlight.
 - H. It is neither unlikely nor likely that a new car at a local dealership has a bad headlight.
 - J. It is impossible that a new car at a local dealership has a bad headlight.
9. Which event is impossible?
- A. A bowl has 10 red marbles and 12 green marbles. You choose a red marble from the bowl.
 - B. A bag has pieces of paper numbered from 1 to 100. You choose a number divisible by 3.
 - C. A spinner has sections lettered A through H. The spinner lands on the 10th letter of the alphabet.
 - D. You roll two standard number cubes and the sum of the numbers rolled is 12.

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10. At A-1 Truck Dealership, a customer can order a red, turquoise, or green truck. The truck can have leather or cloth seats. A customer can also choose a black, tan, or grey interior color. From how many possible trucks can a customer choose?

F. 8

H. 27

G. 18

J. 36

CONSTRUCTED RESPONSE

11. Yvonne draws a marble from a basket. She records the color and puts the marble back into the basket. The experiment is repeated several times. She records the frequency of each color in the table.

Color	Frequency
Red	7
Yellow	9
Green	14
Purple	10

Total:
40

What is the experimental probability of choosing a green marble?

$$\frac{14}{40} = \frac{7}{20}$$

12. A hockey team has 12 girls and 9 boys. Each week the coach chooses one player at random to play goalie for the next game. What is the probability that the coach chooses a girl to be the goalie for the next game?

$$\frac{12}{21} = \frac{4}{7}$$

The probability of choosing a 6 at random from a standard deck of playing cards is $\frac{1}{13}$. Use this information for 13 and 14.

13. What is the complement of the event of choosing a 6?

Not choosing a 6.

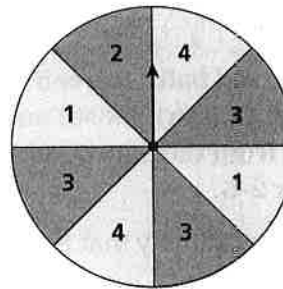
14. What is the probability of the complement of the event of choosing a 6?

$$1 - \frac{1}{13} = \frac{12}{13}$$

15. You roll a standard number cube 1,000 times. Predict the number of times you will roll a 2 or a 5.

$$\frac{1}{3} \times 1,000 \approx 333 \text{ times}$$

Use the spinner for 16 and 17. Tell whether each student is correct and explain.



16. Ashley said, "There are four numbers on this spinner. One of these numbers is 2. Therefore, the probability that this spinner lands on 2 is $\frac{1}{4}$."

No bec the #2 is only up there 1 out of 8 spaces.

17. Suzanne said, "There are two colors on this spinner. One of these colors is blue. Therefore, the probability that this spinner lands on blue is $\frac{1}{2}$."

yes bec 4/8 are blue & 4/8 are gray $4/8 = 1/2$