

Practice 03

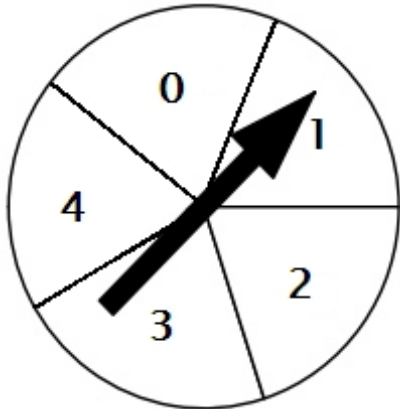
4.1 Sample Space and Probability

4.2 The Addition Rule

- 1) A probability experiment is conducted. Which of these cannot be considered a probability outcome? 1) _____
A) 91% B) 1.58 C) 0.53 D) $\frac{2}{5}$
- 2) How many possible outcomes would there be if three coins were tossed once? 2) _____
A) 2 B) 8 C) 6 D) 4
- 3) Find the probability of getting a number greater than 3 when a die is rolled one time. 3) _____
A) $\frac{2}{3}$ B) $\frac{1}{6}$ C) $\frac{1}{3}$ D) $\frac{1}{2}$
- 4) If two dice are rolled one time, find the probability of getting a sum of 6. 4) _____
A) $\frac{1}{6}$ B) $\frac{1}{12}$ C) $\frac{5}{36}$ D) $\frac{7}{36}$
- 5) If two dice are rolled one time, find the probability of getting a sum less than 5. 5) _____
A) $\frac{5}{36}$ B) $\frac{1}{6}$ C) $\frac{1}{3}$ D) $\frac{7}{36}$
- 6) If a red suit is drawn from an ordinary deck of cards, what is the probability that the card is a diamond? 6) _____
A) $\frac{1}{5}$ B) $\frac{1}{2}$ C) $\frac{1}{3}$ D) $\frac{1}{4}$
- 7) The staff at a small company includes: 4 secretaries, 20 technicians, 4 engineers, 2 executives, and 50 factory workers. If a person is selected at random, what is the probability that he or she is a factory worker? 7) _____
A) $\frac{2}{5}$ B) $\frac{1}{8}$ C) $\frac{1}{4}$ D) $\frac{5}{8}$

8) A couple has four children. Find the probability that all of them are girls. 8) _____
 A) $\frac{1}{4}$ B) $\frac{1}{16}$ C) $\frac{1}{8}$ D) $\frac{1}{2}$

9) A wheel spinner with five equally-sized spaces numbered 0 to 4 is spun twice. Find the sample space, and determine the probability of an odd number on the first spin and an even number on the second spin (*Note: 0 is considered even.*) 9) _____



A) $\frac{9}{25}$ B) $\frac{19}{25}$ C) $\frac{6}{25}$ D) $\frac{4}{25}$

10) A survey asked respondents to indicate their level of satisfaction with government spending. The results are show below. 10) _____

| Response | Number |
|--------------------|--------|
| Very satisfied | 574 |
| Somewhat satisfied | 4,092 |
| Dissatisfied | 4,909 |
| Total | 9,575 |

What is the probability that a sampled person was only somewhat satisfied or dissatisfied with government's spending?

A) 0.064 B) 0.936 C) 0.06 D) 0.94

11) At Wassamatta University, 48.1% of the student body are males. Choose one student at random. What is the probability that the student is female? 11) _____
 A) 48.1% B) 1.9% C) 51.9% D) 50%

12) Two events are mutually exclusive if they cannot both occur. 12) _____
 A) False B) True

13) If $P(A) = 0.25$, $P(B) = 0.51$, and $P(A \text{ or } B) = 0.76$, are A and B mutually exclusive? 13) _____
A) Yes B) No

14) If $P(A) = 0.37$, $P(B) = 0.7$, and $P(A \text{ or } B) = 0.74$, are A and B mutually exclusive? 14) _____
A) No B) Yes

15) In a fish tank, there are 28 goldfish, 3 angelfish, and 17 guppies. If a fish is selected at random, find the probability that it is an angelfish or a guppy. 15) _____
A) $\frac{5}{12}$ B) $\frac{15}{16}$ C) $\frac{7}{12}$ D) $\frac{31}{48}$

16) If a single card is drawn from an ordinary deck of cards, what is the probability of drawing a jack, queen, king, or ace? 16) _____
A) $\frac{4}{13}$ B) $\frac{9}{26}$ C) $\frac{17}{52}$ D) $\frac{5}{13}$

17) A single card is drawn from a deck. Find the probability of selecting a heart or a 8. 17) _____
A) $\frac{17}{52}$ B) $\frac{4}{13}$ C) $\frac{2}{13}$ D) $\frac{1}{4}$

18) In a recent semester at a local university, 520 students enrolled in both General Chemistry and Calculus I. Of these students, 70 received an A in general chemistry, 81 received an A in calculus, and 34 received an A in both general chemistry and calculus. 18) _____

Find the probability that a randomly chosen student received an A in general chemistry or calculus or both.

A) 0.29 B) 0.356 C) 0.225 D) 0.775

19) If $P(A) = 0.28$, $P(B) = 0.34$, and $P(A \text{ and } B) = 0.18$, find $P(A \text{ or } B)$. 19) _____
A) 0.09 B) 0.44 C) 0.18 D) 0.31

Answer Key

Testname: STA2023_PRACTICE03

- 1) B
- 2) B
- 3) D
- 4) C
- 5) B
- 6) B
- 7) D
- 8) B
- 9) C
- 10) D
- 11) C
- 12) B
- 13) A
- 14) A
- 15) A
- 16) A
- 17) B
- 18) C
- 19) B