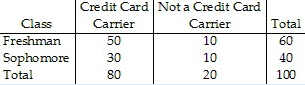
Chapter 1+ 2

1. An employee at the local ice cream parlor asks three customers if they like chocolate ice cream. What is the population?

A. all women custormers C. all custormers

. all men custormers D. three selected custermers

2. A research group asked the students if they carry a credit card. The responses are listed in the table.



If a student is randomly selected, find the probability that he or she owns a credit card given that the student is a freshman. Round your answer to three decimal places.

A. 0.500 B. 0.167 C. 0.625 D. 0.833

3. Parking at a large university has become a very big problem. University administrators are interested in determining the average parking time (e.g. the time it takes a student to find a parking spot) of its students. An administrator inconspicuously followed 130 students and carefully recorded their parking times. Identify the sample of interest to the university administration.

A. type of car (import or domestic) B. parking time of a student

C. location of the parking spot D. parking times of the 130 students

4. Suppose that P(A|B) = 0.6, P(A) = 0.5 and P(B) = 0.1. Find the value of P(B|A).

A. 0.30 B. 0.20 C. 0.12 D. 0.06

5. Which of the following is always true?

A. If A and B are disjoint, P(A) + P(B) = 1

B. If P(A and B) = 0, then A and B are independent.

C. If A and B are disjoint, then they cannot be independent.

D. If P(A and B) = P(A or B), then A and B are independent.

6. If two balanced die are rolled, the possible outcomes can be represented as follows.  
(1, 1) (2, 1) (3, 1) (4, 1) (5, 1) (6, 1)  
(1, 2) (2, 2) (3, 2) (4, 2) (5, 2) (6, 2)  
(1, 3) (2, 3) (3, 3) (4, 3) (5, 3) (6, 3)  
(1, 4) (2, 4) (3, 4) (4, 4) (5, 4) (6, 4)  
(1, 5) (2, 5) (3, 5) (4, 5) (5, 5) (6, 5)  
(1, 6) (2, 6) (3, 6) (4, 6) (5, 6) (6, 6)  
Determine the probability that the sum of the dice is 7.

A. 3/12 B. 1/6 C. 5/36 D. 2/9

7. If P(*A*) = 0.72, P(*B*) = 0.11, and *A* and *B* are independent, find P(*A|B*).

A. 0.11 B. 0.0792 C. 0.72 D. 0.83

8. The probability is 2% that an electrical connector that is kept dry fails during the warranty period of a portable computer. If the connector is ever wet, the probability of a failure during the warranty period is 10%. If 80% of the connectors are kept dry and 20% are wet, what proportion of connectors fail during the warranty period?

A. 0.014 B. 0.6 C. 0.036 D. 0.08

9. An experiment consists of randomly choosing a number between 1 and 10. Let *E* be the event that the number chosen is odd. List the sample points in *E*.

A. {5} B. {2, 4, 6, 8, 10} C. {1, 3, 5, 7, 9} D. {1, 2, 3, 4, 5, 6, 7, 8, 9, 10}

10. Which of the following is a discrete quantitative variable?

A. The distance you drove yesterday. B. The Dow Jones Industrial average

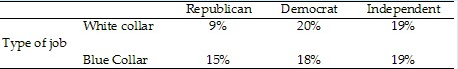
C. The number of employees of an insurance company

D. The volume of water released from a dam

11. The New York State Health Department reports a 12% rate of the HIV virus for the “at-risk” population. Under certain conditions, a preliminary screening test for the HIV virus is correct 99% of the time. If someone is randomly selected from the at-risk population, what is the probability that they have the HIV virus if it is known that they have tested positive in the initial screening?

A. 0.235 B. 0.931 C. 0.456 D. 0.392

12. The breakdown of workers in a particular state according to their political affiliation and type of job held is shown here. Suppose a worker is selected at random within the state and the worker's political affiliation and type of job are noted.  
Political Affiliation



Given the worker is a Democrat, what is the probability that the worker is in a white collar job.

A. 0.417 B. 0.576 C. 0.526 D. 0.303

13. Which of the following is a continuous quantitative variable?

A. The color of a student's eyes

B. The volume of gasoline that is lost to evaporation during the filling of a gas tank.

C. The number of gallons of milk sold at the local grocery store yesterday

D. The number of times a transistor in a computer memory changes state in one operation.

14. Which of the following is not an element of descriptive statistical problems?

A. data are displayed visually in graphs

B. patterns in a data set are identified

C. predictions are made about a larger set of data

D. information revealed in a data set is summarized

15. If two events *A* and *B* are \_\_\_\_\_\_\_\_\_\_, then P(*A* and *B*) = P(*A*)P(*B*).

A. independent B. simple events C. complements D. mutually exclusive

16. Jared was working on a project to look at global warming and accessed an Internet site where he captured average global surface temperatures from 1866. Which of the four methods of data collection was he using?

A. Surveying B. Experimentation C. Observation D. Retrospective study

17. At a Ohio college, 25% of students speak Spanish, 5% speak French, and 3% speak both languages. What is the probability that a student chosen at random from the college speaks Spanish but not French?

A. 0.17 B. 0.22 C. 0.19 D. 0.24

18. A greenhouse is offering a sale on tulip bulbs because they have inadvertently mixed pink bulbs with red bulbs. If 35% of the bulbs are pink and 65% are red, what is the probability that at least one of the bulbs will be pink if 5 bulbs are purchased?

A. 0.2082 B. 0.8840 C. 0.8704 D. 0.9744

19. According to a survey of American households, the probability that the residents own 2 cars if annual household income is over $30,000 is 70%. Of the households surveyed, 50% had incomes over $30,000 and 70% had 2 cars. The probability that the residents of a household own 2 cars and have an income over $30,000 a year is: A. 0.18 B. 0.22 C. 0.48 D. 0.35

20. The probability is 2% that an electrical connector that is kept dry fails during the warranty period of a portable computer. If the connector is ever wet, the probability of a failure during the warranty period is 10%. If 80% of the connectors are kept dry and 20% are wet, what proportion of connectors fail during the warranty period? A. 0.6 B. 0.008 C.0.036 D.0.014