

months is 0.50.

12. (ans) If a die is rolled one time, find these probabilities.

- a. Of getting a 4
- b. Of getting an even number
- c. Of getting a number greater than 4
- d. Of getting a number less than 7
- e. Of getting a number greater than 0
- f. Of getting a number greater than 3 or an odd number
- g. Of getting a number greater than 3 and an odd number

13. If two dice are rolled one time, find the probability of getting these results.

- a. A sum of 6
- b. Doubles
- c. A sum of 7 or 11
- d. A sum greater than 9
- e. A sum less than or equal to 4

14. (ans) If one card is drawn from a deck, find the probability of getting these results.

- a. An ace
- b. A diamond
- c. An ace of diamonds
- d. A 4 or a 6
- e. A 4 or a club
- f. A 6 or a spade
- g. A heart or a club
- h. A red queen
- i. A red card or a 7
- j. A black card and a 10

15. A shopping mall has set up a promotion as follows.

17. In a college class of 250 graduating seniors, 50 have jobs waiting, 10 are going to medical school, 20 are going to law school, and 80 are going to various other kinds of graduate schools. Select one graduate at random.

- a. What is the probability that the student is going to graduate school?
- b. What is the probability that the student is going to medical school?
- c. What is the probability that the student will have to start paying back his deferred student loans after 6 months (i.e., does not continue in school)?

18. Sixty-nine percent of adults favor gun licensing in general. Choose one adult at random. What is the probability that the selected adult doesn't believe in gun licensing?

Source: *Time* magazine.

19. The judicial committee at a particular college consists of 2 administrators, 4 faculty members, 4 seniors, 4 juniors, 2 sophomores, and 2 freshmen. Suppose one committee member is selected at random, find the following probabilities.

- a. That a student is selected
- b. That a senior or a junior is selected
- c. That a nonstudent is selected

20. In a recent year, of the 1,184,000 bachelor's degrees conferred, 233,000 were in the field of business, 125,000



7. On a small college campus, there are 5 English professors, 4 mathematics professors, 2 science professors, 3 psychology professors, and 3 history professors. If a professor is selected at random, find the probability that the professor is the following:

- a. An English or psychology professor
- b. A mathematics or science professor
- c. A history, science, or mathematics professor
- d. An English, mathematics, or history professor

8. The probability that a student owns a car is 0.65, and the probability that a student owns a computer is 0.82. If the probability that a student owns both is 0.55, what is the probability that a given student owns neither a car nor a computer?

9. At a particular school with 200 male students, 58 play football, 40 play basketball, and 8 play both. What is the probability that a randomly selected male student plays neither sport?

10. A single card is drawn from a deck. Find the probability of selecting the following:

- a. A 4 or a diamond
- b. A club or a diamond
- c. A jack or a black card

11. In a statistics class there are 18 juniors and 10 seniors; 6 of the seniors are females, and 12 of the juniors are males. If a student is selected at random, find the probability of selecting the following:

- A junior or a female
- A senior or a female
- A junior or a senior

12. At a used-book sale, 100 books are adult books and 160 are children's books. Seventy of the adult books are nonfiction while 60 of the children's books are nonfiction. If a book is selected at random, find the probability that it is

- Fiction
- Not a children's nonfiction
- An adult book or a children's nonfiction

13. The Bargain Auto Mall has these cars in stock.

	SUV	Compact	Mid-sized
Foreign	20	50	20
Domestic	65	100	45

If a car is selected at random, find the probability that it is

- Domestic
- Foreign and mid-sized
- Domestic or an SUV

14. The number of endangered species for several groups are listed here.

	Mammals	Birds	Reptiles	Amphibians
United States	63	78	14	10
Foreign	251	175	64	8

If one endangered species is selected at random, find the probability that it is

- Found in the United States and is a bird
- Foreign or a mammal
- Warm-blooded

Source: *N.Y. Times Almanac*.

15. A grocery store employs cashiers, stock clerks, and deli personnel. The distribution of employees according to marital status is shown here.

Marital status	Cashiers	Stock clerks	Deli personnel
Married	8	12	3
Not married	5	15	2

If an employee is selected at random, find these probabilities:

- The employee is a stock clerk or married.
- The employee is not married.
- The employee is a cashier or is not married.

In a certain geographic region, newspapers are classified as being published daily morning, daily evening,

and weekly. Some have a comics section and others do not. The distribution is shown here.

Have comics section	Morning	Evening	Weekly
Yes	2	3	1
No	3	4	2

If a newspaper is selected at random, find these probabilities.

- The newspaper is a weekly publication.
- The newspaper is a daily morning publication or has comics.
- The newspaper is published weekly or does not have comics.

17. Three cable channels (6, 8, and 10) have quiz shows, comedies, and dramas. The number of each is shown here.

Type of show	Channel 6	Channel 8	Channel 10
Quiz show	5	2	1
Comedy	3	2	8
Drama	4	4	2

If a show is selected at random, find these probabilities.

- The show is a quiz show, or it is shown on channel 8.
- The show is a drama or a comedy.
- The show is shown on channel 10, or it is a drama.

18. A local postal carrier distributes first-class letters, advertisements, or magazines. For a certain day, she distributed the following numbers of each type of item.

	First-class letters	Ads	Magazines
Home	325	406	203
Business	732	1021	97

If an item of mail is selected at random, find these probabilities.

- The item went to a home.
- The item was an ad, or it went to a business.
- The item was a first-class letter, or it went to a home.

19. The frequency distribution shown here illustrates the number of medical tests conducted on 30 randomly selected emergency patients.

Number of tests performed	Number of patients
0	12
1	8
2	2
3	3
4 or more	5



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18. A local postal carrier distributes first-class letters, advertisements, or magazines. For a certain day, she distributed the following numbers of each type of item.

Delivered to	First-class letters	Ads	Magazines
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Business	732	1021	97

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- The item was an ad, or it went to a business.
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