Determine whether the given events are disjoint.

1) Knowing Spanish and knowing Chinese   1) _____

2) Wearing a coat and wearing a sweater   2) _____

3) Obtaining a face card and obtaining a two when a single card is selected from a deck   3) _____
   of cards

4) Being a teenager and being a United States Senator   4) _____

Find the indicated probability.

5) Find the probability that either a 4 or a 1 is obtained when a fair die is rolled.   5) _____

6) Find the probability that a number less than 5 is obtained when a fair die is rolled.   6) _____

7) When two balanced dice are rolled, there are 36 possible outcomes. Find the   7) _____
   probability that the second die is 4 or the sum of the dice is 7.

8) A spinner has regions numbered 1 through 15. What is the probability that the spinner   8) _____
   will stop on an even number or a multiple of 3?

9) If you pick a card at random from a well shuffled deck, what is the probability that   9) _____
   you get a face card or a spade?

Find the odds.

10) Find the odds in favor of drawing an even number when a card is drawn at random from the cards shown below.

1 2 3 4 5

10) _____

11) Find the odds *against* correctly guessing the answer to a multiple choice question with 4 possible answers.

11) _____

Solve the problem.

12) The odds in favor of a horse winning a race are posted as 8 : 5. Find the probability that the horse will lose the race.

12) _____

List the sample space and tell whether the events are equally likely.

13) An ordinary die is rolled; record the number.

13) _____

Find the probability or percent of the event described.

14) A survey revealed that 45% of people are entertained by reading books, 46% are entertained by watching TV, and 9% are entertained by both books and TV. What is the probability that a person will be entertained by either books or TV?

14) _____

Express the indicated degree of likelihood as a probability value.

15) "You have a 50-50 chance of choosing the correct answer."

15) _____

16) "Your mother could not have died two years before you were born."

16) _____

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Answer the question.

17) What is the probability of an event that is certain to occur?   17) _____

18) Which of the following cannot be a probability?   18) _____

    A) -1   B) $\frac{1}{2}$ C) 0   D) 1

Find the indicated probability.

19) A class consists of 82 women and 40 men. If a student is randomly selected, what is the   19) _____
probability that the student is a woman?

20) Is it "unlikely" to get 12 when a pair of dice is rolled?   20) _____

21) If you drew one card from a standard deck, would it be "unlikely" to draw a 4?   21) _____

From the information provided, create the sample space of possible outcomes.

22) Flip a coin three times.   22) _____

Find the indicated probability.

23) If $P(A) = \frac{9}{19}$, find $P(\overline{A})$.   23) _____

24) Find $P(\overline{A})$, given that $P(A) = 0.466$.   24) _____

25) A spinner has equal regions numbered 1 through 21. What is the probability that the   25) _____
spinner will stop on an even number or a multiple of 3?

26) A card is drawn from a well-shuffled deck of 52 cards. Find P(drawing an ace or a 9).   26) _____

27) The table below describes the smoking habits of a group of asthma sufferers.   27) _____

	Nonsmoker	Occasional smoker	Regular smoker	Heavy smoker	Total
Men	345	40	78	50	513
Women	417	36	72	37	562
Total	762	76	150	87	1075

a) If one of the 1075 people is randomly selected, find the probability of getting a regular or heavy smoker.

b) If one of the people is randomly selected, find the probability of getting a woman or a nonsmoker.

28) The probability that an event will occur is 0.1. What is the probability that the event will not occur?   28) _____