

16. **TX TAKS REASONING** According to a meteorologist, there is a 40% chance that it will rain today. What are the odds in favor of rain?
- (A) 2 : 5 (B) 2 : 3 (C) 3 : 2 (D) 4 : 1
17. **NUMBER CUBES** Make a table showing all of the possible sums that result from rolling two number cubes. (Columns represent the possible outcomes of the first number cube. Rows represent the possible outcomes of the second number cube. The cells of the table represent the sums of the two outcomes.) Then find the probability of rolling each sum.
18. **CHALLENGE** A bag holds red, white, and blue marbles. You randomly draw a marble from the bag. The odds against drawing a white marble are 47 : 3.
- There are fewer than 100 marbles in the bag. How many marbles are in the bag? *Justify* your answer.
 - The probability of drawing a red marble is 0.5. What is the probability of drawing a blue marble? *Explain* how you found your answer.

PROBLEM SOLVING

EXAMPLE 2

on p. 844
for Exs. 19–20

19. **MUSIC PROGRAM** You have created a playlist of 7 songs on your MP3 player. You play these songs in a random shuffle, where each song has an equally likely chance of being played. What is the probability that the second song on the list will be played first?

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20. **SURVEY** A survey asked a total of 600 students (100 male students and 100 female students who were 11, 13, and 15 years old) about their exercise habits. The table shows the numbers of students who said they exercise 2 hours or more each week.

	11 years	13 years	15 years
Female	53	57	51
Male	65	68	67



- What is the probability that a randomly selected female student who participated in this survey exercises 2 hours or more each week?
- What is the probability that a randomly selected 15-year-old student who participated in this survey exercises 2 hours or more each week?
- What is the probability that a randomly selected student who participated in this survey exercises 2 hours or more each week?

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21. **TX TAKS REASONING** Suppose there are 15 girls and 12 boys in your homeroom. The teacher chooses one student representative at random. What is the probability that a boy is chosen? What are the odds in favor of choosing a boy? *Explain* how the probability and odds are related.

EXAMPLES 2 and 4

on pp. 844–845
for Ex. 21