

Developing Skills

3. What is the probability of getting a 2 on a single throw of a fair die?
4. What is the probability of getting a number greater than 2 on a single throw of a fair die?
5. What is the probability of getting a sum of 8 when a pair of dice are thrown?

692 Probability and the Binomial Theorem

6. The buyer of a lottery ticket chooses four numbers from the numbers 1 to 32. Repetition is not allowed.
 - a. How many combinations of four numbers are possible?
 - b. What is the probability of choosing all four of the winning numbers?
7. A standard deck of cards contains 52 cards divided into 4 suits. There are two red suits: hearts and diamonds, and two black suits: clubs and spades. Each suit contains 13 cards; ace, king, queen, jack, and cards numbered 2 through 10. A card is drawn from a standard deck without replacement. What is the probability that the card is a king?