

1. We throw a die. If the number rolled is even, we pay \$4. If the number rolled is odd, we receive as many dollars as the number on the dice shows. For example, if we roll the number 5, we receive \$5. Find the expected value of this game.
2. We throw a die. If the number rolled is odd, we pay \$2. If the number rolled is even, we receive as many dollars as the number on the dice shows. For example, if we roll the number 4, we receive \$4. Find the expected value of this game.
3. There are 6 marbles in a bag: 3 red, 2 blue, and 1 green. We pull a marble. If it is red, we pay \$ 2. If it is blue, we receive \$ 3. If it is green, we receive \$ 4. Find the expected value of this game.
4. We randomly pull a card from a standard deck of 52. If the card is an ace, we receive \$20. If it is a king, we receive \$10. If it is a queen or a jack, we receive \$5. In every other case, we pay \$3. Find the expected value for this game.
5. We roll two dice. If the numbers rolled are different, we pay \$3. If the numbers rolled are the same, we receive as many dollars as the product of the numbers shown on the dice. For example, if we roll the number 5 and 5, we receive \$25. Find the expected value of this game.
6. We have 10 marbles in a bag: 5 red, 3 blue, and 2 yellow. We randomly pull two marbles, without replacement. If we pull two yellow marbles, we receive \$20. If we pull two blue marbles, we receive \$10. If we pull two red marbles, we receive \$5. If we pull two marbles of different colors, we pay \$4. Find the expected value of this game.
7. There are 6 marbles in a bag: 3 red, 2 blue, and 1 green. We pull two marbles. If the two marbles pulled are of the same color, we receive \$ 5. Otherwise, we pay \$ 5. Find the expected value of this game, assuming
 - (a) replacement
 - (b) no replacement