



## 4.5 Review

In this worksheet, we will review what we have learned about probability, combinations and permutations . If you would like further explanation before attempting these problems, links to video descriptions can be found at the end of this worksheet.

- 1 Ben is making making a playlist. He has chosen 7 songs. How many different ways could he order them on the CD?
  - (a) 7
  - (b) 70,435
  - (c) 823,543
  - (d) 5,040
  
- 2 Martin forgot the code to his safety deposit box. He knows the code is four digits long and that each digit can be anything from 0 to 9. How many codes are there for him to try?
  - (a) 100
  - (b) 1,000
  - (c) 10,000
  - (d) 100,000
  
- 3 Cora wants to buy two different kinds of fruit for her lunch from the grocery store. The store has apples, oranges, and bananas. How many different combinations of fruit can she buy?
  - (a) 3
  - (b) 6
  - (c) 9
  - (d) 27
  
- 4 Morgan knows how to cook 3 different kinds of breakfasts, 2 different kinds of lunches and 5 different dinners. How many days can she go before she has the same three meals in a day that she has had before?
  - (a) 25
  - (b) 27
  - (c) 30
  - (d) 36
  
- 5 John has a bag of 5 blue marbles, 7 green marbles and 4 red marbles. What is the probability that he selects a red marble, a blue marble and then a green marble
  - (a)  $1/24$
  - (b)  $35/1024$
  - (c)  $1/16$
  - (d)  $5/4096$



- 6** Maya flips a coin 5 times. What is the chance that it lands heads, tails, tails, tails, tails?
- (a)  $1/10$
  - (b)  $1/5$
  - (c)  $5/32$
  - (d)  $1/32$
- 7** Lisa rolls a die 3 times. What is the probability that it lands on 5 all three times?
- (a)  $1/216$
  - (b)  $3/5$
  - (c)  $1/6$
  - (d)  $3/216$
- 8** Anthony enters a raffle. If there are 50 other male contestants and 42 female contestants, what is the probability that Anthony will win?
- (a)  $1/50$
  - (b)  $1/93$
  - (c)  $1/51$
  - (d)  $1/43$
- 9** Andrew has 6 pencils in his bag, 2 of which do not have erasers. What is the probability that he grabs two pencils in a row without erasers?
- (a)  $1/15$
  - (b)  $1/3$
  - (c)  $1/8$
  - (d)  $2/3$