1. A pizza shop has available toppings of sausage, onions, peppers, mushrooms, pepperoni, anchovies, and olives. How many different ways can a pizza be made with 2 toppings?

2. There were 7 students running in a race. How many different arrangements of first, second, and third place are possible?

3. A pizza shop has available toppings of onions, anchovies, olives, bacon, sausage, pepperoni, and mushrooms. How many different ways can a pizza be made with 4 toppings?

4. A pizza shop has available toppings of olives, bacon, sausage, onions, anchovies, and mushrooms. How many different ways can a pizza be made with 2 toppings?

5. A committee must be formed with 2 teachers and 7 students. If there are 10 teachers to choose from, and 12 students, how many different ways could the committee be made?

6. In a running competition, a bronze, silver and gold medal must be given to the top three girls and top three boys. If 12 boys and 10 girls are competing, how many different ways could the six medals possibly be given out?

7. In a running competition, a bronze, silver and gold medal must be given to the top three girls and top three boys. If 8 boys and 7 girls are competing, how many different ways could the six medals possibly be given out?

8. In a running competition, a bronze, silver and gold medal must be given to the top three girls and top three boys. If 9 boys and 13 girls are competing, how many different ways could the six medals possibly be given out?

9. What is the total number of different 10-letter arrangements that can be formed using the letters in the word ENTRENCHED?

10. What is the total number of different 13-letter arrangements that can be formed using the letters in the word ACCOMMODATION?

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