



Combinations and Permutations

 Calculate the value of each.

1) $4! = \underline{\hspace{2cm}}$

5) $7! = \underline{\hspace{2cm}}$

2) $4! \times 3! = \underline{\hspace{2cm}}$

6) $8! = \underline{\hspace{2cm}}$

3) $5! = \underline{\hspace{2cm}}$

7) $4! + 4! = \underline{\hspace{2cm}}$

4) $6! + 3! = \underline{\hspace{2cm}}$

8) $4! - 3! = \underline{\hspace{2cm}}$

 Solve each word problems.

9) Susan is baking cookies. She uses sugar, flour, butter, and eggs. How many different orders of ingredients can she try? _____

10) Jason is planning for his vacation. He wants to go to museum, watch a movie, go to the beach, and play volleyball. How many different ways of ordering are there for him?

11) How many 5-digit numbers can be named using the digits 1, 2, 3, 4, and 5 without repetition? _____

12) In how many ways can 5 boys be arranged in a straight line? _____

13) In how many ways can 4 athletes be arranged in a straight line? _____

14) A professor is going to arrange her 7 students in a straight line. In how many ways can she do this? _____

15) How many code symbols can be formed with the letters for the word WHITE?

16) In how many ways a team of 8 basketball players can to choose a captain and co-captain?



Answers

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- 1) 24
- 2) 144
- 3) 120
- 4) 726
- 5) 5,040
- 6) 40,320

- 7) 48
- 8) 18
- 9) 24
- 10) 24
- 11) 120
- 12) 120

- 13) 24
- 14) 5,040
- 15) 120
- 16) 56