



## Factorials, Permutations, and Combinations

### Practice Questions

**Directions:** Select the letter of the correct answer.

1) What must be the value of  $x$  so that  $x! = 5,040$ ?

- (a) 8
- (b) 7
- (c) 6
- (d) 5

2) How many distinguishable permutations can be formed using the letters of the word "FACTORIALS"?

- (a) 1 814 400
- (b) 2 550 200
- (c) 820 000
- (d) 750 000

3) How many three-digit numbers can you form using the numbers 0, 3, 4, 7, and 9 (repetition of digits is not allowed)?

- (a) 36
- (b) 48
- (c) 72
- (d) 122

4) How many groups consisting of five people can be formed from 12 people?

- (a) 512
- (b) 792
- (c) 880
- (d) 912

5) How many triangles can you form using 5 points on a plane?

- (a) 25
- (b) 18
- (c) 12
- (d) 10



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*To God be the glory!*