

# Chapter 12 Review Questions



Studying for a chapter examination is a personal process, one which nobody else can do for you. Simply take the time to review what you have done. Here are the new terms in Chapter 12.

Arrangement [12.1]	Factorial [12.1]	Ordered triple [12.1]
Binomial theorem [12.2]	Fundamental counting principle [12.1]	Permutation [12.1, 12.2]
Cards, deck of [12.2]	Instant Insanity [12.4]	Rubik's cube [12.4]
Combination [12.1, 12.2]	Multiplication property of factorials [12.1]	Tree diagram [12.1]
Count-down property [12.1]	Ordered pair [12.1]	
Distinguishable permutation [12.1]		

If you can describe the term, read on to the next one; if you cannot, then look it up in the text (the section number is shown in brackets). Next, study the types of problems listed at the end of Chapter 12.

## TYPES OF PROBLEMS

- Apply the Fundamental Counting Principle. [12.1]
- Simplify expressions involving factorials. [12.1]
- Know the permutation formula. [12.1]
- Evaluate permutations and distinguishable permutations.[12.1]
- Know the combination formula. [12.2]
- Evaluate combinations. [12.2]
- Distinguish among a permutation, a combination, a distinguishable permutation, and the fundamental counting principle. [12.3]
- Answer applied counting questions. [12.1-12.3]
- Use the notation involving Rubik's cube [12.4]
- Explain the Instant Insanity problem [12.4]

Once again, see if you can verbalize (to yourself) how to do each of the listed types of problems.

Work all of Chapter 12 Review Questions (whether they are assigned or not). Work through all of the problems before looking at the answers, and *then* correct each of the problems. The entire solution is shown in the answer section at the back of the text. If you worked the problem correctly, move on to the next problem, but if you did not work it correctly (or you did not know what to do), look back in the chapter to study the procedure, or ask your instructor.

Finally, go back over the homework problems you have been assigned. If you worked a problem correctly, move on the next problem, but if you missed it on your homework, then you should look back in the book or talk to your instructor about how to work the problem.

If you follow these steps, you should be successful with your review of this chapter.