

Counting Methods #2

1. An artist selects three paintings from a collection of six to display in a row. How many different arrangements of the display are possible?
2. The program committee of a music festival must arrange five acts for an evening performance. They have seven performers available. How many different arrangements of the evening performances are possible?
3. Five people are to be seated in a row. How many different arrangements of all five people are possible?
4. A race has ten horses entered. How many distinct possibilities are there for the first three places?
5. In how many ways can the letters in the word "STOP" be arranged?
6. In how many ways can a president, a vice-president, and a secretary be selected from an organization of 32 members?
7. How many different "words" are possible using all the letters of POSSIBLE?
8. How many different "words" are possible using all the letters of:
 - a. MISSISSIPPI
 - b. BOOKKEEPER
9. The Pizza Place must hire two employees from six applicants. In how many ways can this be done?
10. A Boy Scout troop has 15 members. In how many different ways can the scoutmaster appoint three members to clean up camp?
11. In How many ways can a committee of four be selected from a group of seven people?
12. In how many ways can a slate of officers consisting of a chair, vice-chair, secretary and treasurer be selected from a group of seven people?
13. A company must hire three truck drivers and four clerks. There are six applicants for truck driver and ten for clerk. In how any ways can the seven employees be chosen?
14. A Presidential Task Force is selected from eight executives and twelve staff positions. The task force has a chair and secretary chosen from the executives and four members chosen from the staff positions. In how many ways can the committee be formed?
15. In how many different ways can you select three different letters from the word HISTORY?
16. A teacher has a collection of 20 questions. How many different tests of five questions each can be made from the set of questions?