

## **Permutations and Combinations WS**

Name \_\_\_\_\_

1. How many different ways can 5 cars be arranged on a carrier truck with room for 5 vehicles?
2. A computer operator must select 4 jobs from among 10 available jobs waiting to be completed. How many different sequences are possible?
3. You are working on a prom planning committee with 5 other people. Your committee has to decide on two committee members randomly to present the prom theme to the student body. How many pairings are possible?
4. A health inspector has time to visit 7 of the 20 restaurants on a list. How many different routes are possible?
5. A pollster must randomly select 3 of 12 available people. How many different groups of 3 are possible?
6. A union must elect 4 officers from 16 available candidates. How many different slates are possible if 1 candidate is nominated for each office?
7. A typical combination lock is opened with the correct sequence of 3 numbers between 0 and 49 inclusive. How many different sequences are possible? (A number can only be used once.) Are the sequences combinations or are they actually permutations?
8. A television program director has 14 shows available for Monday night, and 5 shows must be chosen. How many different possible combinations are there?
9. How many ways can you rearrange the letters in the phrase "ILOVEMATH".
10. In order to complete a quiz you must answer four questions from a list of twelve. How many different ways can you complete the quiz.