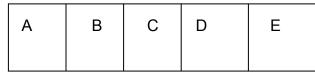Algebra 2B   Name_____

Counting Problems Homework

1.   There are 6 cheerleaders on the 8th grade squad and they need to get in a straight line. How many different ways can they line up?

2.   A workout gym has lockers with combinations that require you to push 5 letters (A – E) in without repeating any letters.

A	B	C	D	E

How many unique locker combinations are possible?

3.   Another workout gym has the same locks, but it requires you to push only 3 of the buttons, not repeating any of the letters. How many unique locker combinations are possible?

4.   There is a school election coming up. The positions that need to be filled are President, Vice-President, Treasurer, and Secretary. There are 10 equally qualified applicants.   How many different ways can these 10 people fill these positions?

5. My truck has a keyless entry with the numbers 1-6 below. My code to unlock the truck must be 4 digits long. (you may repeat numbers) How many unique combinations are there?

1	2	3	4	5	6

6. You have 3 pairs of jeans, 2 pairs of shoes and 4 sweatshirts, all of which are color-coordinated.   How many different combinations of outfits can you wear? (assume you wear pants, shoes and a shirt)

7. You are making a submarine sandwich. You have 3 meats to choose from, 4 cheeses and 6 types of bread. If you can only choose one from each category, how many different subs can you make?