Name _____ Date _____ Period _____

1. Stacey can choose her costume from 3 masks, 6 outfits, and 4 pairs of shoes. How many arrangements are possible?

72

2. How many positive even integers less than 10,000 can be written using only the digits 2, 4, 6, and 7?

192

3. Evaluate ${}_8P_5$.

6720

4. Delmar made 13 teddy bears for the Stuffed Animal Extravaganza. In how many ways can he display them in a row if only 6 may be displayed at a time (order is important)?

1,235,520

5. How many ways can the letters of the word PREPOSITION be distinguishably rearranged?

4,989,600

6. Evaluate ${}_9C_3$.

84

7. How many combinations can be formed from the word TIMER taking them 3 at a time?

10

8. How many different ice hockey starting lineups of 6 (positions don't matter) can be made from a team of 10 players?

210

9. Make up a word problem that uses either permutations or combinations (like #4 or #8). Write it in the blanks below.

_____

_____

_____

_____

_____

10. Correctly solve the problem you created in #9.

_____