

Name \_\_\_\_\_ Date \_\_\_\_\_ Period \_\_\_\_\_

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

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

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3. Evaluate  ${}_8P_5$ .

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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)?

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

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6. Evaluate  ${}_9C_3$  .

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

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

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

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

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