

NAME: \_\_\_\_\_

*P.I. A2.S.13: Calculate theoretical probabilities*

1. What is the probability that 4 letters chosen from 6 different letters will be chosen in alphabetical order?
2. You and two friends visit a pizza shop. There are 15 toppings. Six toppings are meat and the rest are vegetable. You each order a different topping (no repeats) at random. What is the probability that your group orders only meat toppings?
3. Four friends order a sweatshirt from a catalog. There are 14 colors of sweatshirts, 8 of which are all cotton and 6 of which are a blend. They each order a different color (no repeats) at random. What is the probability that the friends order only cotton sweatshirts?
4. A president and vice president are selected from a group of 5 girls and 4 boys. What is the probability that both the president and vice president will be girls?

$$[1] \quad \frac{{}_6C_4}{{}_6P_4} = \frac{1}{24}$$

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$$[2] \quad \frac{4}{91}$$

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$$[3] \quad \frac{10}{143}$$

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$$[4] \quad \frac{5}{18}$$

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