

Name: _____

Combinations

- 1) A box contains 8 blue socks and 6 red socks. Find the number of ways two socks can be drawn from the box if:
 - 1) They can be any color
 - 2) They must be the same color
- 2) A restaurant has 6 different deserts. Find the number n of ways a customer can choose 2 of the deserts
- 3) A store has 8 different mystery books. Find the number n of ways a customer can buy 3 of the books.
- 4) A class contains 9 boys and 3 girls. Find the number of ways a teacher can select a committee of 4 from the class.
- 5) A student must answer 10 out of 13 questions on an exam. Find the number n of choices if there are no restrictions.
- 6) A box contains 12 lightbulbs. Find the number n of ordered samples of size 3:
 - 1) With replacement
 - 2) Without replacement
- 7) A class contains 10 students. Find the number n of ordered samples of size 4:
 - 1) With replacement
 - 2) Without replacement
- 8) A class contains 10 male students and 8 female students. Find the number of ways that the class can elect
 - 1) A class representative
 - 2) 2 class representatives, one male and one female
 - 3) A class president and vice president
- 9) A woman has 11 close friends. Find the number n of ways she can invite 5 of them to dinner.
- 10) The board of directors of a corporation has 10 members. In how many ways can they choose a committee of 3 board members to negotiate a merger?