

Combinations and Permutations

Name: _____

The following problems use combinations or permutations to find the answers. Remember, for permutations order is important, but for combinations it isn't:

- 1.) The names of 3 raffle ticket holders out of 20 are to be randomly drawn out of a hat. First place wins \$20, second place wins \$10 and third place wins \$5. How many different ways can everyone in the raffle place?

Answer: _____

- 2.) 6 lottery balls are drawn out of 10 that are labeled 1 through 10 to create the sequence for a winning lottery ticket. A winning ticket must have the numbers in the same order that the balls were drawn. How many strings of 6 numbers can be used as possibilities?

Answer: _____

- 3.) 12 people out of 30 are chosen for a jury. How many ways can the jury be chosen?

Answer: _____

- 4.) 50 people entered to win a rubber ducky from Rubber Ducky Inc. 20 of them were chosen to win rubber duckies. How many different combinations of people could win rubber duckies?

Answer: _____

- 5.) You pull out 5 cards from a deck of 52. How many variations of cards could be pulled out?

Answer: _____