



Combinations and Permutations Stretch

11. _____ combinations How many combinations of 5 different pieces of candy can be chosen from a bowl of 8 different pieces of candy?

12. _____ What is the value of $\binom{8}{6}$?



13. _____ combinations Vijay flips 4 coins. How many combinations of heads and tails are possible?

14. _____ permutations



Valerie rolls 3 standard dice. When the dice are placed in a row and read from left to right, how many permutations of numbers on the top faces are possible?

15. _____ combinations Juan plans to order a pizza with 4 different toppings. He gets to choose from peppers, mushrooms, onions, sausage, pepperoni, anchovies and ground beef. How many combinations of 4 of these toppings can Juan select?

16. _____ color orders A bag of marbles has 3 blue, 2 orange and 2 green marbles. In how many different color orders can the marbles be drawn out of the bag?

17. _____ combinations How many combinations of 4 different kinds of flowers can be made into a bouquet of 6 flowers, given that at least 1 of each flower is included?

18. _____ ways A group of 6 students working on a project needs to fill positions for a manager and an assistant manager. In how many ways can students from this group be assigned to the 2 positions?

19. _____ combinations Seth chooses 3 solid-colored cards, which can be red, yellow or green. There are at least 3 cards of each color available. How many combinations of the 3 cards could Seth have?

20. _____ permutations Beth chooses 3 solid-colored cards, which can be red, yellow or green. There are at least 3 cards of each color available. How many permutations of the 3 cards could Beth have?

