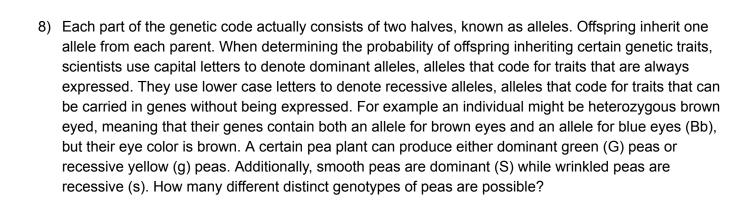
Counting Techniques

| 1) | A florist sells a mixed bouquet option where you can pick any two flower types from a list of five common flowers. How many different two flower combinations are possible? |
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| 2) | A pizza restaurant is offering a special on two-toppings pizzas. If the restaurant features eight different pizza toppings, how many different two-topping pizza combinations are possible? |
| 3) | A certain restaurant sells one-scoop ice cream sundaes. You have the choice of an ice cream-flavor (vanilla, chocolate, or strawberry); a sauce (hot fudge or caramel); and a topping (nuts, sprinkles, cookie crumbles or strawberries). Given the choices, how many different one-scoop ice cream sundaes are possible? |
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| 4) | A certain burger joint lists the following options on their "Build-a-Better-Burger" menu. According to the menu, you may build the burger of your choice for only \$7.95 by choosing any one item from each category. |
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| | Buns: Soft White, Whole Wheat, Lettuce Wrap or Pretzel Roll Burger: Traditional beef burger, turkey burger or veggie patty Cheese: Cheddar, pepperjack or swiss Premium Topping: Bacon, avocado or sauteed mushrooms |
| | How many different "Better Burger" options can be constructed by choosing one item from each Category? |
| 5) | In the student council elections, three students are running for president, four are running for vice president, two are running for treasurer and one is running uncontested for secretary. How many different possible student council teams could be elected from these students? |
| 6) | Two identical standard six-sided dice are rolled. How many distinct rolls are possible? |
| 7) | A scientist is performing an experiment in which one of 5 metals is exposed to one of 4 different corrosive substances for 24 hours to determine their relative reactivity. How many different samples of one metal and one corrosive substance will the scientist end up testing? |
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9) In a certain state, license plates are created using any three of twenty-four letters (the state does not use O's or I's on plates), followed by any three digit number. Repeated letters and numbers are allowed. How many different license plate combinations are possible?