Multiplication Counting Principle

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1. There are 10 girls and 10 boys at a school dance. Each boy dances with each girl one time. How many dances are there in all?

   [A] 1000 [B] 10 [C] 20 [D] 100

2. A yogurt shop offers two different flavors of frozen yogurt and three different toppings. How many choices are possible for a single serving of frozen yogurt with one topping?

   [A] 15 [B] 6 [C] 5 [D] 8

3. Jamestown Builders has a development of new homes. There are four different floor plans, six exterior colors, and an option of either a one- or a two-car garage. How many choices are there for one home?

   [A] 26 [B] 48 [C] 72 [D] 40

4. A lunch menu consists of 4 different kinds of sandwiches, 2 different kinds of soup, and 5 different drinks. How many choices are there for ordering a sandwich, a bowl of soup, and a drink?

   [A] 3 [B] 40 [C] 11 [D] 5760

5. A cafe serves a variety of stuffed potatoes. You can choose from russet, yellow, or white potatoes with any of 10 different fillings. How many different varieties of stuffed potatoes can you choose from?

6. Suppose Ruth Ann has three routes she can choose from to get from school to the library, and 4 routes from the library to her home. How many routes are there from Ruth Ann's school to her home with a stop at the library?

7. Use any problem solving strategy to solve the following problem. There are 6 possible ways to make two selections. If the events are independent, how many possible ways are there to make the first selection?

Answers

[1] D

[2] B

[3] B

[4] B

[5] 30

[6] 12

[7] 1, 2, 3, or 6