Advanced Algebra Section 10.5 Day 2 More with Word Problems

Example 1:

A pizza restaurant has a menu that allows you to choose from 2 types of crust, 3 types of sauce, and 8 toppings. If you order a pizza with one type of crust, one sauce, and 3 toppings, how many different pizzas could you order?

Example 2: You borrow 5 books from your friend's home library, which has 12 mystery novels and 7 romance novels. If you plan to choose 3 mystery novels and 2 romance novels, how many different combinations of 5 books are possible?

Example 3: A neighborhood party is planned, and the host asks her 7 neighbors to each bring 1 food item to share from the list she made of 12 food items. Assuming each member randomly chooses a food item to bring to the party, what is the probability that at least 2 of the 7 neighbors bring the same item?

Example 4: You are one of 8 contestants in a singing competition. The order of the performances is determined at random. The first 4 performers go on stage before the intermission.

a. What is the probability that you are the last performer before the intermission and your rival performs immediately before you?

b. What is the probability that you are NOT the first performer?