Counting Problems

About These Problems

Counting Problems include combinations, permutations, and fundamental counting principles.

Question. If Vito's pizzeria has three toppings for their lunch special (Chicken, Pepperoni, and Sausage) and their meat pizza has 2 toppings, how many different types of pizza can you buy? (You must get two toppings)

A. 1
B. 2
C. 3
D. 4
E. 5

Answer. C: The easiest approach is on the calculator. 3C2 yields 3. Or working it out the only combinations are Chicken and Pepperoni, Pepperoni and Sausage, and Chicken and Sausage.

Question. How many odd numbers divisibly by three exist between 1 and 1000?

F. 333
G. 300
H. 200
I. 666
J. None of the above

Answer. F: Divide and conquer. Find out how many exist from 1-30. There are 10. 990 divided by 30 is 33. Add 993, 996, 999 to 10*33 and your answer is 333.