# Macintosh HD:Users:Amit:Progs:ExcelerateLive:HTML:ml.png Excelerate Lesson Plan

**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)

1. 1
2. 2
3. 3
4. 4
5. 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?

1. 333
2. 300
3. 200
4. 666
5. 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.