

More questions to foster the relationship between counting processes and sets of outcomes:

- 1) Suppose you flipped a fair coin five times in a row. How many possibilities could you get after all five flips? What is the probability that you got three heads and two tails?
- 2) How many two-digit numbers can you make using the numbers 1 through 5, where repetition of numbers is allowed? How many with no repeated numbers?
- 3) How many two-digit numbers contain exactly one odd digit?
- 4) How many ways are there for 2 people to sit in 5 chairs that are in a row?
- 5) There are three kinds of soda to choose from, cola, ginger ale, and root beer. Suppose four people want to order 1 soda each. How many ways can this happen?
- 6) How many ways are there to pick some pieces of fruit from 4 (identical) oranges and 3 (identical) apples if at least 1 piece is picked?
- 7) Suppose you can make a "word" that is 4 letters long, made from the letters A, B, C, D, and E. How many words contain at least 3 E's?
- 8) If you roll two die (one green and one red), what is the probability that the sum of the values on the die will be odd?
- 9) How many ways can you rearrange the letters in the word KITE? What about the word TREE?
- 10) How many ways are there to make a pizza with 1 or 2 toppings, if the choices are pepperoni, olives, sausage, ham, mushrooms, and anchovies (double toppings allowed)?