

**Combination or Permutation?**

Directions: Write each problem in P or C notation, and then solve.

- 1) I had 42 really cool Symmetry projects turned in, but I only have room to display 6 of them. How many different groups of 6 are there?

Notation:

Solution:

- 2) There are 40 program icons that I could put on my computer screen, but I only want 12 to show. ( I like my computer screen neat and tidy) How many groups of 12 icons could I choose?

Notation:

Solution:

- 3) Ten students are running for 3 positions: President, Secretary and Treasurer. How many different ways can this race turn out?

Notation:

Solution:

- 4) 24 students would like to be on the dress-code committee, but only 4 will be chosen. How many different student-committees could be formed in this situation?

Notation:

Solution:

- 5) I had 42 really cool Symmetry projects turned in, but I only have room to display 6 of them. How many different ways can I arrange the 6 across my wall from left to right?

Notation:

Solution:

- 6) How many 2-letter 'words' can be formed using the 6 letters in 'hoping' ?

Notation:

Solution:

### **Combination, Permutation or FCP?...Practice**

Directions: Write each problem in P or C notation, and then solve.

If it is not a combination or permutation, write FCP and then solve.

- 7) Joe wants to have all 8 of his friends over, but he is only allowed to invite 4 at a time. How many different groups of friends could he invite over?
  
- 8) I have 7 different colored tiles and I want to arrange 3 of them over my sink. How many different arrangements could I have?
  
- 9) Nine students are interested in getting one of the following positions: President, Vice-President and Treasurer of the student council. How many different ways can this election turn out?
  
- 10) You have 10 different kinds of candy and your Mommy says that you can only eat 3 right now. How many different groups of 3 candies can you choose?
  
- 11) Sarah is making a sundae and she has 3 different choices for ice cream, 5 choices for toppings, and 2 choices for sprinkles. If she is getting the \$ .99 special and can only choose one from each category, how many different sundaes could she make?
  
- 12) Zacary has 16 toys in his toy basket. He is only capable of carrying 4 toys at a time. How many different groups of 4 toys can he choose from his toy basket?
  
- 13) Zacary has somehow gotten all of his 16 toys out of his toy basket. They are now all on the floor! How many different ways can he line up 3 toys at a time for a toy parade?
  
- 14) There are 15 willing dodgeball participants. A dodgeball team is made up of 6 players. How many different teams can be made from these 15-willing participants?
  
- 15) Mr. Zubal is preparing for a triathlon in Florida. He owns 9 swimsuits, 6 racing jerseys, and 5 pairs of tights. He always takes an extra of each, so he needs two suits, two jerseys, and two pairs of tights. How many ways can he pack?