

Calculate the total number of possible outcomes.

- a) In how many different ways can a 2-person committee be selected from 10 people?

- b) 20 old video games are in a bin. The sign says pick any 4 for \$5. How many different groups of 4 are possible?

If you have a standard deck of cards in how many different ways can you deal out (Order Matters)

- c) 5 cards?
- d) 10 cards?
- e) 5 red cards?
- f) 4 queens?

If you have a standard deck of cards in how many different hands (Groups) exists of

- g) 5 cards?
- h) 10 cards?
- i) 5 red cards?
- j) 4 queens?

k) How many ways can 12 volleyball teams members line up if the captain and assistant captain must be 1st and 2nd in the lineup?

l) The game of euchre uses only 24 cards from a standard deck. How many different 5 card euchre hands (groups) are possible?

Given a bag with 11 tiles, 4 with vowels (A, I, O, E) and 7 with consonants (T, R, K, W, P, H, L).

m) How many groups can be formed by pulling 4 tiles from the bag? n) How many groups of 4 could be made up of only vowels? o) How many groups of 4 could be made up of only consonants?

p) In how many ways can a committee of six teachers be formed from a group of 12 teachers?

q) A club elects a president, vice-president, and secretary. How many sets of officers are possible if there are 13 members and any member can be elected to each position? No person can hold more than one office.

r) A physics exam consists of 9 multiple choice questions. If an examinee must answer any 7 of the questions how many groups of 7 can be chosen?

s) A teacher and 6 students are to be seated along a bench in the bleachers at a basketball game. In how many ways can this be done if the teacher must be seated in the middle and a difficult student must sit to the teacher's immediate left?

t) You want to arrange 7 of your favorite CD's along a shelf. If the Imagine Dragon's CD must come first, how many different ways can you arrange the CD's assuming that the order of the CD's makes a difference to you?