A **combination** is a set of objects in which order is *not* important.

The formula: $${}_nC_r = \frac{{}_nP_r}{r!}$$

** Remember n --> total
r --> want
! --> factorial

Example: Evaluate ${}_7C_2 = \frac{7 \cdot 6}{2 \cdot 1} = \frac{42}{2} = 21$

Example: There are 12 boys and 14 girls in Mrs. Schultzkie's math class. Find the number of ways Mrs. Schultzkie can select a team of 3 students from the class to work on a group project. The team consists of 1 girl and 2 boys.

boy ${}_{12}C_2$ girl ${}_{14}C_1$

$$\frac{12 \cdot 11}{2 \cdot 1} \qquad \frac{14}{1}$$

$$66 \cdot 14$$

$$= 924$$