

Then we have

$$\binom{n}{k} = \frac{n!}{k!(n-k)!}$$

Some examples:

- $\binom{n}{n-k} = \binom{n}{k}$ (by symmetry of formula)
- $\binom{n}{0} = \frac{n!}{0!n!} = 1$
- $\binom{n}{n} = \frac{n!}{n!0!} = 1$
- $\binom{n}{1} = \binom{n}{n-1} = n, \dots$