

1. (a) Here's a binomial: $\binom{n}{k}$
2. (a) And a multinomial: $\binom{n}{1,2,3}$
(b) A fraction with a binomial: $\frac{\binom{x}{y}}{z^2}$
3. A summation: $\sum_{i=1}^n i^2$
4. A product in math mode:

$$\prod_{i=1}^n x = x^n$$

5. And a line
break.