## Thermal Physics

## Gaussian distribution, binary systems

Problem 1.- Graph the binary distribution and the Gaussian approximation for $\mathrm{N}=10$ and $\mathrm{N}=$ 100.

Solution: Binary distribution and the Gaussian approximation for $\mathrm{N}=10$ :


The exact value of the multiplicity is the curve in blue, while the approximation is in pink. Binary distribution and the Gaussian approximation for $\mathrm{N}=100$ :


