$$\mathbb{P}(X > x) = \mathbb{P}\left(\underbrace{X+v}_{=f} > x+v\right)$$

$$\frac{2^{N-1} v^{N-1} e^{-(x+2v)^2/2}}{v^{N-1} e^{-v^2/2}}.$$

$$= \quad 2^{N-1} e$$

$$\frac{v^{N-1} e^{-u^2 - 2uv + v^2/2 - v^2/2}}{v^{N-1}}.$$

$$= \quad e^{-\left(\boxed{u^2} - 2uv\right)/2}$$

e^{-u^2} is small

for as