

$$X \sim \mathcal{N}(m, \sigma^2).$$

$$P(m - a\sigma \leq X \leq m + a\sigma) = 99\%.$$

$$\text{soit } P\left(-a \leq \frac{X-m}{\sigma} \leq a\right) = 0,99$$

$$P(-a \leq Y \leq a) = 0,99$$

$$F_Y(a) - F_Y(-a) = 0,99$$

$$F_Y(a) - (1 - F_Y(a)) = 0,99$$

$$2F_Y(a) - 1 = 0,99$$

$$F_Y(a) = \frac{0,99 + 1}{2} = \frac{1,99}{2} = 0,995$$

les tables donnent $a \approx 2,575$

$$P(m - \underline{2,575}\sigma \leq X \leq m + \underline{2,575}\sigma) = 99\%.$$

