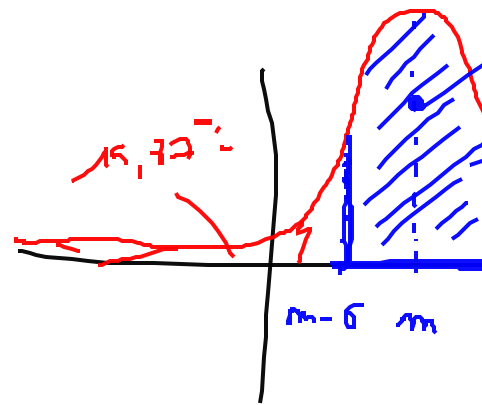


Ex:  $X \sim \mathcal{N}(m; \sigma^2)$

Calcular  $P(m - \sigma < X < m + \sigma)$



Supose  $Y = \frac{X - m}{\sigma}$

$$\begin{aligned} & P\left(\frac{m - \sigma - m}{\sigma} < \frac{X - m}{\sigma} < \frac{m + \sigma - m}{\sigma}\right) \\ &= P(-1 < Y < 1) \\ &= F_Y(1) - F_Y(-1) \\ &= F_Y(1) - (1 - F_Y(1)) \\ &= 2F_Y(1) - 1 = 2 \times 0,8413 - 1 \\ &\approx 1,6826 - 1 \\ &\approx 0,6826 \text{ mil } 68,26\% \end{aligned}$$