

2) LOGARITEMSKO NORMALNA PORAZDELITEV

$$m_y = 40, \quad \sigma_y = 10$$

$$\tilde{m}_y = \frac{m_y^2}{\sqrt{\sigma_y^2 + m_y^2}} = 38.806$$

$$\sigma_{\ln y} = \sqrt{\ln\left(\frac{\sigma_y^2}{m_y^2} + 1\right)} = 0.2462$$

$$\begin{aligned} P[30 \leq Y \leq 60] &= F_Y(60) - F_Y(30) = F_U\left(\frac{\ln 60 - \ln \tilde{m}_y}{\sigma_{\ln y}}\right) - F_U\left(\frac{\ln 30 - \ln \tilde{m}_y}{\sigma_{\ln y}}\right) \\ &= F_U(1.7699) - F_U(-1.0453) = F_U(1.7699) - 1 + F_U(1.0453) \\ &= 0.9616 - 1 + 0.8520 = 0.8136 \end{aligned}$$

$$\underline{\underline{P[30 \leq Y \leq 60] = 0.8136}}$$