
7: Wat zijn serviceprocessen?

Formule 1:

$$F(t) = \lambda e^{-\lambda t}, \text{ waarbij } \lambda \text{ de gemiddelde aankomsten zijn per tijdsperiode.}$$

Formule 2:

$$P_T(n) = ((\lambda T)^n e^{-\lambda T}) / n!$$

Model 1:

$$L_q = \frac{\lambda^2}{\mu(\mu - \lambda)}$$

$$L_s = \frac{\lambda}{\mu - \lambda}$$

$$W_q = \frac{L_q}{\lambda}$$

$$W_s = \frac{L_s}{\lambda}$$

$$P_n = \left(1 - \frac{\lambda}{\mu}\right) \left(\frac{\lambda}{\mu}\right)^n$$

$$P_0 = p \left(1 - \frac{\lambda}{\mu}\right)$$

$$p = \frac{\lambda}{\mu}$$

Model 2:

$$L_q = \frac{\lambda^2}{2\mu(\mu - \lambda)}$$

$$L_s = L_q + \left(\frac{\lambda}{\mu}\right)$$

$$W_q = \frac{L_q}{\lambda}$$

$$W_s = \frac{L_s}{\lambda}$$

Model 3:

$$L_s = L_q + \left(\frac{\lambda}{\mu}\right)$$

$$W_q = \frac{L_q}{\lambda}$$

$$W_s = \frac{L_s}{\lambda}$$

$$P_w = L_q \left(\frac{S\mu}{\lambda} - 1\right)$$