\[ l_x = \text{age specific survivorship} \]
\[ m_x = \text{age specific fecundity} \]
\[ \Sigma l_x m_x = R_0 = \text{net reproductive rate} \]
(and generational growth rate)

\[ \frac{N_1}{N_0} = \lambda \quad \lambda = \text{finite rate of increase} \]

\[ N_t = N_0 \lambda^t \quad \lambda = \text{finite rate of increase} \]
\[ r = \text{per capita rate of increase} \quad r_{max} = \text{intrinsic rate of increase} \]

\[ N_t = N_0 \lambda^t \quad \lambda = e^r \quad N_t = N_0 e^{rt} \]

\[ r = \ln\left(\frac{R_0}{g}\right) \]