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## Weibull quantile function

variant 0

$$F(y) = 1 - e^{-\lambda y^\alpha}$$

$$F(q_\alpha) = \alpha$$

DEF

given:

$$q_\alpha = \left[ -\frac{1}{\lambda} (\log(1-\alpha)) \right]^{1/\alpha}$$

so

$$\lambda = -\frac{1}{q_\alpha^\alpha} \log(1-\alpha)$$

variant 0

$$F(y) = 1 - e^{-(\lambda y)^\alpha}$$

$$1-\alpha = e^{-(\lambda q_\alpha)^\alpha}$$

g.w.

$$\lambda = \frac{1}{q_\alpha} \left[ -\log(1-\alpha) \right]^{1/\alpha}$$