12/12/17

Weibull quantile function

variant 0

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

$$F(q_\alpha) = \alpha \qquad \text{DEF}$$

gives:

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

or

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

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variant 0

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

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

g.w.

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