$\mu x := 40$

$\upsilon x := 0.15$

$\sigma := \mu x \cdot \upsilon x = 6$

$q := 0.25$

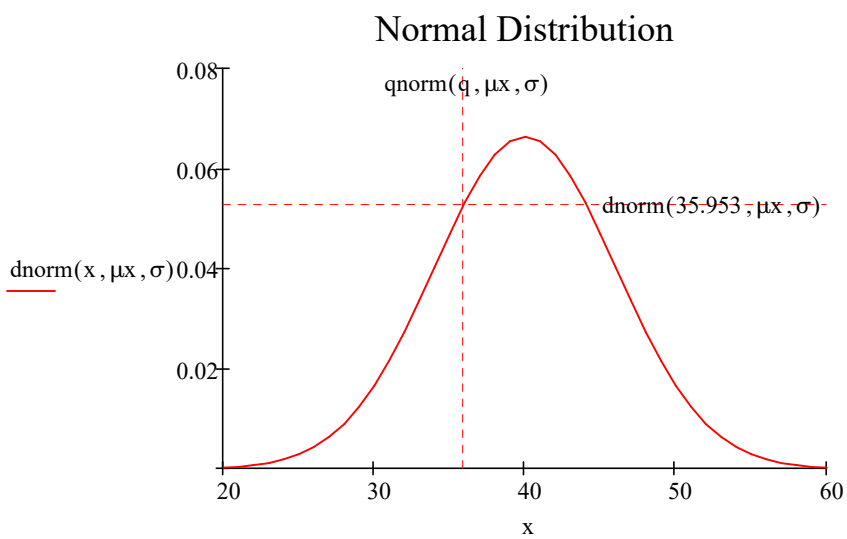
$x := 20, 21 .. 60$

$dnorm(x, \mu x, \sigma) =$

$2.57 \cdot 10^{-4}$
...

$qnorm(q, \mu x, \sigma) = 35.953$

$dnorm(qnorm(q, \mu x, \sigma), \mu x, \sigma) = 0.053$



$pnorm(x, \mu x, \sigma) =$

$4.291 \cdot 10^{-4}$
$7.71 \cdot 10^{-4}$
...

$pnorm(35.953, \mu x, \sigma) = 0.25$

Guess

$u := 8$
$k := 1.001$

Given

$$\frac{k}{u}\cdot\left(\frac{x}{u}\right)^{k-1}\exp\left[-\left(\frac{x}{u}\right)^{k}\right] = 0.053$$

$$1-\exp\left[-\left(\frac{x}{u}\right)^{k}\right] = 0.25$$

Find

$k = 1.001$ **!!!!!!**

$u = 8$