RATIO OF 2 DEPENDENT NORMAL VARIABLES

$$F(z) := \sqrt{\pi}\cdot\sqrt{z}\cdot e^{z}\cdot \mathrm{erf}\left(\sqrt{z}\right) + 1$$

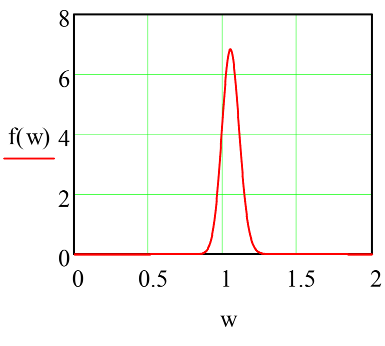
$\mu_x := 75.25 \quad \sigma_x := 6.25 \qquad \rho := 0.76$

$\mu_y := 71.58 \quad \sigma_y := 5.45$

$$A := \frac{1}{2\cdot\pi\cdot\sigma_x\cdot\sigma_y\cdot\sqrt{1-\rho^2}} \qquad K_4 := A\cdot e^{\frac{-\sigma_y^2\cdot\mu_x^2+2\cdot\rho\cdot\sigma_x\cdot\sigma_y\cdot\mu_x\cdot\mu_y-\mu_y^2\cdot\sigma_x^2}{2\cdot\left(1-\rho^2\right)\cdot\sigma_x^2\cdot\sigma_y^2}}$$

$$\theta_2(t) := \frac{-\sigma_y^2\cdot\mu_x\cdot t + \rho\cdot\sigma_x\cdot\sigma_y\cdot\left(\mu_y\cdot t + \mu_x\right) - \mu_y\cdot\sigma_x^2}{\sigma_x\cdot\sigma_y\cdot\sqrt{2\cdot\left(1-\rho^2\right)\cdot\left(\sigma_y^2\cdot t^2 - 2\cdot t\cdot\rho\cdot\sigma_x\cdot\sigma_y + \sigma_x^2\right)}}$$

$$f(w) := K_4\cdot\frac{2\cdot\left(1-\rho^2\right)\cdot\sigma_x^2\cdot\sigma_y^2}{\sigma_y^2\cdot w^2 - 2\cdot w\cdot\rho\cdot\sigma_x\cdot\sigma_y + \sigma_x^2}\cdot F\left(\theta_2(w)^2\right)$$



$$\mathrm{mean} := \int_0^{\infty} t\cdot f(t)\, dt$$

$$\mathrm{var} := \int_0^{\infty} t^2\cdot f(t)\, dt - \mathrm{mean}^2$$

$\mathrm{mean} = 1.052$

$\mathrm{var} = 3.474 \times 10^{-3}$