"FRV(a,b)"

$$[x \mapsto \frac{\Gamma\left(a/2+b/2\right) x^{a/2-1}}{\Gamma\left(a/2\right)\Gamma\left(b/2\right)} \left(\frac{a}{b}\right)^{a/2} \left(\left(\frac{a\,x}{b}+1\right)^{a/2+b/2}\right)^{-1}]$$

$$t \mapsto t^2$$

Probability Distribution Function

$$f(x) = 1/2\,\frac{\Gamma\left(a/2+b/2\right) a^{a/2} b^{b/2} x^{a/4-1} \left(a\sqrt{x}+b\right)^{-a/2-b/2}}{\Gamma\left(a/2\right)\Gamma\left(b/2\right)} \qquad 0 < x < \infty$$

$$t \mapsto \sqrt{t}$$

Probability Distribution Function

$$f(x) = 2\,\frac{\Gamma\left(a/2+b/2\right)\left(a\,x^2+b\right)^{-a/2-b/2} b^{b/2} \left(|x|\right)^a a^{a/2}}{x\Gamma\left(a/2\right)\Gamma\left(b/2\right)} \qquad 0 < x < \infty$$

$$t \mapsto t^{-1}$$

Probability Distribution Function

$$f(x) = \frac{\Gamma\left(a/2+b/2\right) a^{a/2} b^{b/2} \left(x^{-1}\right)^{a/2}}{x\Gamma\left(a/2\right)\Gamma\left(b/2\right)} \left(\frac{b\,x+a}{x}\right)^{-a/2-b/2} \qquad 0 < x < \infty$$

$$t \mapsto \arctan\left(t\right)$$

Probability Distribution Function

$$f(x) = \frac{a^{a/2} b^{b/2} \left(\tan\left(x\right)\right)^{a/2-1} \left(a\,\tan\left(x\right)+b\right)^{-a/2-b/2} \left(1+\left(\tan\left(x\right)\right)^2\right) \Gamma\left(a/2+b/2\right)}{\Gamma\left(a/2\right)\Gamma\left(b/2\right)} \qquad 0 < x < \pi$$

$$t \mapsto \mathrm{e}^t$$

Probability Distribution Function

$$f(x) = \frac{a^{a/2} b^{b/2} \left(\ln\left(x\right)\right)^{a/2-1} \left(a\,\ln\left(x\right)+b\right)^{-a/2-b/2} \Gamma\left(a/2+b/2\right)}{x\Gamma\left(b/2\right)\Gamma\left(a/2\right)} \qquad 1 < x < \infty$$

$$t \mapsto \ln\left(t\right)$$

Probability Distribution Function

$$f(x) = \frac{\Gamma\left(a/2+b/2\right) a^{a/2} b^{b/2} \mathrm{e}^{1/2\,xa} \left(a\,\mathrm{e}^{x}+b\right)^{-a/2-b/2}}{\Gamma\left(a/2\right)\Gamma\left(b/2\right)} \qquad -\infty < x < \infty$$

$$t \mapsto \mathrm{e}^{-t}$$

Probability Distribution Function

$$f(x) = \frac{a^{a/2} b^{b/2} \left(-\ln\left(x\right)\right)^{a/2-1} \left(-a\,\ln\left(x\right)+b\right)^{-a/2-b/2} \Gamma\left(a/2+b/2\right)}{x\Gamma\left(b/2\right)\Gamma\left(a/2\right)} \qquad 0 < x < 1$$

$$t \mapsto -\ln\left(t\right)$$

Probability Distribution Function

$$f(x) = \frac{\Gamma\left(a/2+b/2\right) a^{a/2} b^{b/2} \mathrm{e}^{-1/2\,xa} \left(a\,\mathrm{e}^{-x}+b\right)^{-a/2-b/2}}{\Gamma\left(a/2\right)\Gamma\left(b/2\right)} \qquad -\infty < x < \infty$$

$$t \mapsto \ln\left(t+1\right)$$

Probability Distribution Function

$$f(x) = \frac{\Gamma\left(a/2+b/2\right) a^{a/2} b^{b/2} \left(\mathrm{e}^{x}-1\right)^{a/2-1} \mathrm{e}^{x} \left(a\,\mathrm{e}^{x}-a+b\right)^{-a/2-b/2}}{\Gamma\left(a/2\right)\Gamma\left(b/2\right)} \qquad 0 < x < \infty$$

$$t \mapsto \left(\ln\left(t+2\right)\right)^{-1}$$

Probability Distribution Function

$$f(x) = \frac{\Gamma\left(a/2+b/2\right) a^{a/2} b^{b/2} \left(e^{x^{-1}}-2\right)^{a/2-1} e^{x^{-1}} \left(a\, e^{x^{-1}}-2\,a+b\right)^{-a/2-b/2}}{\Gamma\left(a/2\right)\Gamma\left(b/2\right) x^2} \qquad 0 < x < (\ln(2))$$

$$t \mapsto \tanh(t)$$

Probability Distribution Function

$$f(x) = -\frac{a^{a/2} b^{b/2} \left(\operatorname{arctanh}(x)\right)^{a/2-1} \left(a \operatorname{arctanh}(x)+b\right)^{-a/2-b/2} \Gamma\left(a/2+b/2\right)}{\left(x^2-1\right)\Gamma\left(b/2\right)\Gamma\left(a/2\right)} \qquad 0 < x < 1$$

$$t \mapsto \sinh(t)$$

Probability Distribution Function

$$f(x) = \frac{a^{a/2} b^{b/2} \left(\operatorname{arcsinh}(x)\right)^{a/2-1} \left(a \operatorname{arcsinh}(x)+b\right)^{-a/2-b/2} \Gamma\left(a/2+b/2\right)}{\sqrt{x^2+1}\,\Gamma\left(b/2\right)\Gamma\left(a/2\right)} \qquad 0 < x < \infty$$

$$t \mapsto \operatorname{arcsinh}(t)$$

Probability Distribution Function

$$f(x) = \frac{\Gamma\left(a/2+b/2\right) a^{a/2} b^{b/2} \left(\sinh(x)\right)^{a/2-1} \cosh(x) \left(a \sinh(x)+b\right)^{-a/2-b/2}}{\Gamma\left(a/2\right)\Gamma\left(b/2\right)} \qquad 0 < x < \infty$$

$$t \mapsto \operatorname{csch}(t+1)$$

Probability Distribution Function

$$f(x) = \frac{a^{a/2} b^{b/2} \left(-1+\operatorname{arccsch}(x)\right)^{a/2-1} \left(a \operatorname{arccsch}(x)-a+b\right)^{-a/2-b/2} \Gamma\left(a/2+b/2\right)}{\sqrt{x^2+1}\,\Gamma\left(b/2\right)\Gamma\left(a/2\right)|x|} \qquad 0 < x <$$

$$t \mapsto \operatorname{arccsch}(t+1)$$

Probability Distribution Function

$$f(x) = -\frac{\Gamma(a/2+b/2)\, a^{a/2} b^{b/2} \cosh(x)}{\Gamma(a/2)\,\Gamma(b/2)\,(\sinh(x)-1)\sinh(x)} \left(-\frac{\sinh(x)-1}{\sinh(x)}\right)^{a/2} \left(-\frac{a\,\sinh(x) - b\,\sinh(x) -}{\sinh(x)}\right.$$

$$t \mapsto (\tanh(t+1))^{-1}$$

Probability Distribution Function

$$f(x) = \frac{a^{a/2} b^{b/2} \left(-1+\operatorname{arctanh}\left(x^{-1}\right)\right)^{a/2-1} \left(a \operatorname{arctanh}\left(x^{-1}\right) - a + b\right)^{-a/2-b/2} \Gamma(a/2+b/2)}{\left(x^2-1\right)\Gamma(b/2)\,\Gamma(a/2)} \qquad 1 <$$

$$t \mapsto (\sinh(t+1))^{-1}$$

Probability Distribution Function

$$f(x) = \frac{a^{a/2} b^{b/2} \left(-1+\operatorname{arcsinh}\left(x^{-1}\right)\right)^{a/2-1} \left(a \operatorname{arcsinh}\left(x^{-1}\right) - a + b\right)^{-a/2-b/2} \Gamma(a/2+b/2)}{\sqrt{x^2+1}\,\Gamma(b/2)\,\Gamma(a/2)\,|x|} \qquad 0 <$$

$$t \mapsto (\operatorname{arcsinh}(t+1))^{-1}$$

Probability Distribution Function

$$f(x) = \frac{\Gamma(a/2+b/2)\, a^{a/2} b^{b/2} \left(-1+\sinh\left(x^{-1}\right)\right)^{a/2-1} \cosh\left(x^{-1}\right) \left(a\,\sinh\left(x^{-1}\right) - a + b\right)^{-a/2-b/2}}{\Gamma(a/2)\,\Gamma(b/2)\,x^2}$$

$$t \mapsto (\operatorname{csch}(t))^{-1} + 1$$

Probability Distribution Function

$$f(x) = \frac{a^{a/2} b^{b/2} \left(\operatorname{arccsch}\left((x-1)^{-1}\right)\right)^{a/2-1} \left(a \operatorname{arccsch}\left((x-1)^{-1}\right) + b\right)^{-a/2-b/2} \Gamma(a/2+b/2)}{\sqrt{x^2-2\,x+2}\,\Gamma(b/2)\,\Gamma(a/2)}$$

$$t \mapsto \tanh\left(t^{-1}\right)$$

Probability Distribution Function

$$f(x) = -\frac{a^{a/2} b^{b/2} \left((\operatorname{arctanh}(x))^{-1} \right)^{a/2} \Gamma(a/2 + b/2)}{\operatorname{arctanh}(x) (x^2 - 1) \Gamma(b/2) \Gamma(a/2)} \left(\frac{b \operatorname{arctanh}(x) + a}{\operatorname{arctanh}(x)} \right)^{-a/2 - b/2} \qquad 0 < x < 1$$

$$t \mapsto \operatorname{csch}\left(t^{-1}\right)$$

Probability Distribution Function

$$f(x) = \frac{a^{a/2} b^{b/2} (\operatorname{arccsch}(x))^{-a/2-1} \Gamma(a/2 + b/2)}{\sqrt{x^2+1}\,\Gamma(b/2) \Gamma(a/2) |x|} \left(\frac{b \operatorname{arccsch}(x) + a}{\operatorname{arccsch}(x)} \right)^{-a/2 - b/2} \qquad 0 < x < \infty$$

$$t \mapsto \operatorname{arccsch}\left(t^{-1}\right)$$

Probability Distribution Function

$$f(x) = \frac{\Gamma(a/2 + b/2) a^{a/2} b^{b/2} (\sinh(x))^{a/2-1} \cosh(x) (a \sinh(x) + b)^{-a/2-b/2}}{\Gamma(a/2) \Gamma(b/2)} \qquad 0 < x < \infty$$