"ArcTanRV(a,b)"

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

$$t \mapsto t^2$$

Probability Distribution Function

$$f(x) = -\frac{a}{(2\,\arctan(a\,b) + \pi)\,(2\,\sqrt{x}a^2b - a^2b^2 - xa^2 - 1)\,\sqrt{x}} \qquad 0 < x < \infty$$

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

Probability Distribution Function

$$f(x) = 4\,\frac{a\,x}{(2\,\arctan(a\,b) + \pi)\,(a^2x^4 - 2\,a^2b\,x^2 + a^2b^2 + 1)} \qquad 0 < x < \infty$$

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

Probability Distribution Function

$$f(x) = 2\,\frac{a}{(2\,\arctan(a\,b) + \pi)\,(a^2b^2x^2 - 2\,a^2b\,x + a^2 + x^2)} \qquad 0 < x < \infty$$

$$t \mapsto \arctan(t)$$

Probability Distribution Function

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

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

Probability Distribution Function

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

$$t \mapsto \ln(t)$$

Probability Distribution Function

$$f(x) = 2\,\frac{a\,\mathrm{e}^x}{(2\,\arctan(a\,b)+\pi)\,(\mathrm{e}^{2\,x}a^2 - 2\,\mathrm{e}^x a^2b + a^2b^2 + 1)} \qquad -\infty < x < \infty$$

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

Probability Distribution Function

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

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

Probability Distribution Function

$$f(x) = 2\,\frac{a\,\mathrm{e}^x}{(2\,\arctan(a\,b)+\pi)\,(\mathrm{e}^{2\,x}a^2b^2 - 2\,\mathrm{e}^x a^2b + \mathrm{e}^{2\,x} + a^2)} \qquad -\infty < x < \infty$$

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

Probability Distribution Function

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

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

Probability Distribution Function

$$f(x) = 2\,\frac{a\,\mathrm{e}^{x^{-1}}}{(2\,\arctan(a\,b)+\pi)\,x^2}\left(\mathrm{e}^{2\,x^{-1}}a^2 - 2\,\mathrm{e}^{x^{-1}}a^2b + a^2b^2 - 4\,\mathrm{e}^{x^{-1}}a^2 + 4\,a^2b + 4\,a^2 + 1\right)^{-1}$$

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

Probability Distribution Function

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

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

Probability Distribution Function

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

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

Probability Distribution Function

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

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

Probability Distribution Function

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

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

Probability Distribution Function

$$f(x) = -2 \frac{a \cosh(x)}{(2 \arctan(a\,b) + \pi)\left(-a^2b^2 (\cosh(x))^2 - 2\,a^2b\,(\cosh(x))^2 + 2 \sinh(x)\,a^2b - a^2 (\cosh($$

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

Probability Distribution Function

$$f(x) = 2 \frac{a}{(2 \arctan(a\,b) + \pi)\left((\operatorname{arctanh}(x^{-1}))^2 a^2 - 2 \operatorname{arctanh}(x^{-1})\,a^2b + a^2b^2 - 2 \operatorname{arctanh}(x^{-1})\right.}$$

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

Probability Distribution Function

$$f(x) = 2 \frac{a}{\sqrt{x^2+1}\,(2 \arctan(a\,b) + \pi)\left((\operatorname{arcsinh}(x^{-1}))^2 a^2 - 2 \operatorname{arcsinh}(x^{-1})\,a^2b + a^2b^2 - 2 \operatorname{arcsinh}\right.}$$

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

Probability Distribution Function

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

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

Probability Distribution Function

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

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

Probability Distribution Function

$$f(x) = -2\,\frac{a}{(2\,\arctan(a\,b)+\pi)\left((\operatorname{arctanh}(x))^2\,a^2b^2 - 2\operatorname{arctanh}(x)\,a^2b + (\operatorname{arctanh}(x))^2 + a^2\right)(x^2}$$

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

Probability Distribution Function

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

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

Probability Distribution Function

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