"GeneralizedParetoRV(a,b,c)"

$$[x \mapsto \left(a + \frac{c}{x+b}\right)\left(1+\frac{x}{b}\right)^{-c} \mathrm{e}^{-a\,x}]$$

$$t \mapsto t^2$$

Probability Distribution Function

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

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

Probability Distribution Function

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

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

Probability Distribution Function

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

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

Probability Distribution Function

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

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

Probability Distribution Function

$$f(x) = (a\,\ln(x) + a\,b + c)\,b^c\,(\ln(x) + b)^{-c-1}\,x^{-a-1} \qquad 1 < x < \infty$$

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

Probability Distribution Function

$$f(x) = (a\,e^x + a\,b + c)\,(e^x + b)^{-c-1}\,b^c e^{-a\,e^x + x} \qquad -\infty < x < \infty$$

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

Probability Distribution Function

$$f(x) = -(a\,\ln(x) - a\,b - c)\,b^c\,(-\ln(x) + b)^{-c-1}\,x^{a-1} \qquad 0 < x < 1$$

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

Probability Distribution Function

$$f(x) = (e^x a\,b + c e^x + a)\,e^{-(x e^x + a) e^{-x} + cx}\,(e^x b + 1)^{-c-1}\,b^c \qquad -\infty < x < \infty$$

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

Probability Distribution Function

$$f(x) = (a\,e^x + a\,b - a + c)\,b^c\,(e^x - 1 + b)^{-c-1}\,e^{-a\,e^x + a + x} \qquad 0 < x < \infty$$

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

Probability Distribution Function

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

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

Probability Distribution Function

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

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

Probability Distribution Function

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

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

Probability Distribution Function

$$f(x) = \left(a \sinh(x) + a\,b + c\right) b^c \left(\sinh(x) + b\right)^{-c-1} \mathrm{e}^{-a \sinh(x)} \cosh(x) \qquad 0 < x < \infty$$

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

Probability Distribution Function

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

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

Probability Distribution Function

$$f(x) = \frac{\left(a + a\,b \sinh(x) - a \sinh(x) + c \sinh(x)\right) b^c \cosh(x)}{\left(\sinh(x)\right)^2 \left(b \sinh(x) - \sinh(x) + 1\right)} \left(\frac{b \sinh(x) - \sinh(x) + 1}{\sinh(x)}\right)^{-c} \mathrm{e}^{\frac{a\,(\sinh}{\sin}}$$

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

Probability Distribution Function

$$f(x) = \frac{(a\,\mathrm{arctanh}\,(x^{-1}) + a\,b - a + c)\,b^c\,(-1 + \mathrm{arctanh}\,(x^{-1}) + b)^{-c-1}\,\mathrm{e}^{-a\left(-1+\mathrm{arctanh}\left(x^{-1}\right)\right)}}{x^2 - 1} \qquad 1$$

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

Probability Distribution Function

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

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

Probability Distribution Function

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

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

Probability Distribution Function

$$f(x) = \frac{\left(a\,\mathrm{arccsch}\left((x-1)^{-1}\right) + a\,b + c\right)b^c\left(\mathrm{arccsch}\left((x-1)^{-1}\right) + b\right)^{-c-1}\mathrm{e}^{-a\,\mathrm{arccsch}\left((x-1)^{-1}\right)}}{\sqrt{x^2 - 2\,x + 2}} \qquad 1$$

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

Probability Distribution Function

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

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

Probability Distribution Function

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

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

Probability Distribution Function

$$f(x) = \left(a\, b + c + a\, \sinh(x)\right) b^{c} \left(b + \sinh(x)\right)^{-c-1} \mathrm{e}^{-a\, \sinh(x)} \cosh(x) \qquad 0 < x < \infty$$