"LomaxRV(a,b)"

$$[x \mapsto b\,a\,(b\,x+1)^{-a-1}]$$

---

$$t \mapsto t^2$$

Probability Distribution Function

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

---

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

Probability Distribution Function

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

---

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

Probability Distribution Function

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

---

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

Probability Distribution Function

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

---

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

Probability Distribution Function

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

---

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

Probability Distribution Function

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

---

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

Probability Distribution Function

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

---

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

Probability Distribution Function

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

---

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

Probability Distribution Function

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

---

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

Probability Distribution Function

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

---

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

Probability Distribution Function

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

---

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

Probability Distribution Function

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

---

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

Probability Distribution Function

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

---

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

Probability Distribution Function

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

---

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

Probability Distribution Function

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

---

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

Probability Distribution Function

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

---

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

Probability Distribution Function

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

---

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

Probability Distribution Function

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

---

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

Probability Distribution Function

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

---

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

Probability Distribution Function

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

---

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

Probability Distribution Function

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

---

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

Probability Distribution Function

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