$$filename := \text{"C:/LatexOutput/InverseGaussian\_Gen.tex"}$$

$$\frac{1}{2}\sqrt{2}\sqrt{\frac{a\sim}{\pi x^3}}\,e^{-\frac{1}{2}\frac{a\sim(x-b\sim)^2}{b\sim^2 x}}$$

"i is", 1,

" ----------"

$$g := t \to t^2$$

$$l := 0$$

$$u := \infty$$

$$Temp := \left[\left[y\sim \to \frac{\sqrt{2}\sqrt{a\sim}\sqrt{\frac{1}{y\sim^{3/2}}}\,e^{-\frac{1}{2}\frac{a\sim(\sqrt{y\sim}-b\sim)^2}{b\sim^2\sqrt{y\sim}}}}{\sqrt{\pi}\sqrt{y\sim}}\right], [0, \infty], [\text{"Continuous"}, \text{"PDF"}]\right]$$

"l and u", 0, ∞

$$\text{"g(x)"}, x^2, \text{"base"}, \frac{1}{2}\sqrt{2}\sqrt{\frac{a\sim}{\pi x^3}}\,e^{-\frac{1}{2}\frac{a\sim(x-b\sim)^2}{b\sim^2 x}}, \text{"InverseGaussianRV(a,b)"}$$

$$\text{"f(x)"}, \frac{1}{4}\frac{\sqrt{2}\sqrt{a\sim}\sqrt{\frac{1}{x^{3/2}}}\,e^{-\frac{1}{2}\frac{a\sim(\sqrt{x}-b\sim)^2}{b\sim^2\sqrt{x}}}}{\sqrt{\pi}\sqrt{x}}$$

"i is", 2,

" ----------"

$$g := t \to \sqrt{t}$$

$$l := 0$$

$$u := \infty$$

$$Temp := \left[\left[y\sim \to \frac{\sqrt{2}\sqrt{a\sim}\,e^{-\frac{1}{2}\frac{a\sim(-y\sim^2+b\sim)^2}{b\sim^2 y\sim^2}}}{y\sim\sqrt{\pi}\,|y\sim|}\right], [0, \infty], [\text{"Continuous"}, \text{"PDF"}]\right]$$

"l and u", 0, ∞

$$\text{"g(x)"}, \sqrt{x}, \text{"base"}, \frac{1}{2}\sqrt{2}\sqrt{\frac{a\sim}{\pi x^3}}\, e^{-\frac{1}{2}\frac{a\sim (x-b\sim)^2}{b\sim^2 x}}, \text{"InverseGaussianRV(a,b)"}$$

$$\text{"f(x)"}, \frac{\sqrt{2}\sqrt{a\sim}\, e^{-\frac{1}{2}\frac{a\sim (-x^2+b\sim)^2}{b\sim^2 x^2}}}{x\sqrt{\pi}\,|x|}$$

"i is", 3,

" ----------"

$$g := t \to \frac{1}{t}$$

$$l := 0$$

$$u := \infty$$

$$Temp := \left[\left[y\sim \to \frac{1}{2}\,\frac{\sqrt{2}\ \text{signum}(y\sim)\sqrt{a\sim}\, e^{-\frac{1}{2}\frac{a\sim (b\sim y\sim -1)^2}{y\sim b\sim^2}}}{\sqrt{y\sim}\sqrt{\pi}}\right], [0, \infty], [\text{"Continuous"}, \text{"PDF"}]\right]$$

"l and u", 0, ∞

$$\text{"g(x)"}, \frac{1}{x}, \text{"base"}, \frac{1}{2}\sqrt{2}\sqrt{\frac{a\sim}{\pi x^3}}\, e^{-\frac{1}{2}\frac{a\sim (x-b\sim)^2}{b\sim^2 x}}, \text{"InverseGaussianRV(a,b)"}$$

$$\text{"f(x)"}, \frac{1}{2}\,\frac{\sqrt{2}\ \text{signum}(x)\sqrt{a\sim}\, e^{-\frac{1}{2}\frac{a\sim (b\sim x-1)^2}{x b\sim^2}}}{\sqrt{x}\sqrt{\pi}}$$

"i is", 4,

" ----------"

$$g := t \to \arctan(t)$$

$$l := 0$$

$$u := \infty$$

$$Temp := \left[\left[y\sim \to \frac{1}{2}\,\frac{\sqrt{2}\sqrt{a\sim}\sqrt{\frac{1}{\tan(y\sim)}}\, e^{-\frac{1}{2}\frac{a\sim (\tan(y\sim)-b\sim)^2}{b\sim^2 \tan(y\sim)}}\left(1+\tan(y\sim)^2\right)}{\sqrt{\pi}\,|\tan(y\sim)|}\right], \left[0, \frac{1}{2}\pi\right],$$

["Continuous", "PDF"]

"l and u", 0, ∞

"g(x)", $\arctan(x)$, "base", $\frac{1}{2}\sqrt{2}\sqrt{\frac{a\sim}{\pi x^3}}\,e^{-\frac{1}{2}\frac{a\sim(x-b\sim)^2}{b\sim^2 x}}$, "InverseGaussianRV(a,b)"

"f(x)", $\frac{1}{2}\frac{\sqrt{2}\sqrt{a\sim}\sqrt{\frac{1}{\tan(x)}}\,e^{-\frac{1}{2}\frac{a\sim(\tan(x)-b\sim)^2}{b\sim^2\tan(x)}}\left(1+\tan(x)^2\right)}{\sqrt{\pi}\,|\tan(x)|}$

"i is", 5,

" ----------"

$g := t \to e^t$

$l := 0$

$u := \infty$

$Temp := \left[\left[y\sim \to \frac{1}{2}\frac{\sqrt{2}\sqrt{a\sim}\sqrt{\frac{1}{\ln(y\sim)^3}}\,e^{-\frac{1}{2}\frac{a\sim(\ln(y\sim)-b\sim)^2}{b\sim^2\ln(y\sim)}}}{\sqrt{\pi}\,y\sim}\right], [1, \infty], ["Continuous", "PDF"]\right]$

"l and u", 0, ∞

"g(x)", e^x, "base", $\frac{1}{2}\sqrt{2}\sqrt{\frac{a\sim}{\pi x^3}}\,e^{-\frac{1}{2}\frac{a\sim(x-b\sim)^2}{b\sim^2 x}}$, "InverseGaussianRV(a,b)"

"f(x)", $\frac{1}{2}\frac{\sqrt{2}\sqrt{a\sim}\sqrt{\frac{1}{\ln(x)^3}}\,e^{-\frac{1}{2}\frac{a\sim(\ln(x)-b\sim)^2}{b\sim^2\ln(x)}}}{\sqrt{\pi}\,x}$

"i is", 6,

" ----------"

$g := t \to \ln(t)$

$l := 0$

$u := \infty$

$$Temp := \left[\left[y\sim \to \frac{1}{2}\ \frac{\sqrt{2}\ \sqrt{a\sim}\ e^{-\frac{1}{2}\ \frac{e^{y\sim} a\sim - 2\,a\sim\, b\sim + e^{-y\sim} a\sim\, b\sim^2 + y\sim\, b\sim^2}{b\sim^2}}}{\sqrt{\pi}}\right], [-\infty, \infty],\right.$$

$$\left.["Continuous", "PDF"]\right]$$

$$"l \text{ and } u", 0, \infty$$

$$"g(x)", \ln(x), "base", \frac{1}{2}\sqrt{2}\ \sqrt{\frac{a\sim}{\pi x^3}}\ e^{-\frac{1}{2}\ \frac{a\sim\,(x - b\sim)^2}{b\sim^2 x}}, "InverseGaussianRV(a,b)"$$

$$"f(x)", \frac{1}{2}\ \frac{\sqrt{2}\ \sqrt{a\sim}\ e^{-\frac{1}{2}\ \frac{e^{x} a\sim - 2\,a\sim\, b\sim + e^{-x} a\sim\, b\sim^2 + x\, b\sim^2}{b\sim^2}}}{\sqrt{\pi}}$$

"i is", 7,

" ----------"

$$g := t \to e^{-t}$$

$$l := 0$$

$$u := \infty$$

$$Temp := \left[\left[y\sim \to \frac{1}{2}\ \frac{\sqrt{2}\ \sqrt{a\sim}\ \sqrt{-\frac{1}{\ln(y\sim)^3}}\ e^{\frac{1}{2}\ \frac{a\sim\,(\ln(y\sim) + b\sim)^2}{b\sim^2 \ln(y\sim)}}}{\sqrt{\pi}\ y\sim}\right], [0, 1], ["Continuous",\right.$$

$$\left."PDF"]\right]$$

$$"l \text{ and } u", 0, \infty$$

$$"g(x)", e^{-x}, "base", \frac{1}{2}\sqrt{2}\ \sqrt{\frac{a\sim}{\pi x^3}}\ e^{-\frac{1}{2}\ \frac{a\sim\,(x - b\sim)^2}{b\sim^2 x}}, "InverseGaussianRV(a,b)"$$

$$"f(x)", \frac{1}{2}\ \frac{\sqrt{2}\ \sqrt{a\sim}\ \sqrt{-\frac{1}{\ln(x)^3}}\ e^{\frac{1}{2}\ \frac{a\sim\,(\ln(x) + b\sim)^2}{b\sim^2 \ln(x)}}}{\sqrt{\pi}\ x}$$

"i is", 8,

" ----------"

$$g := t \to -\ln(t)$$

$$l := 0$$

$$u := \infty$$

$$Temp := \left[\left[y\sim \to \frac{1}{2}\ \frac{\sqrt{2}\ \sqrt{a\sim}\ e^{-\frac{1}{2}\ \frac{e^{y\sim} a\sim b\sim^2 - 2\,a\sim b\sim - y\sim b\sim^2 + a\sim e^{-y\sim}}{b\sim^2}}}{\sqrt{\pi}}\right], [-\infty, \infty],\right.$$

$$\left.["Continuous", "PDF"]\right]$$

$$"l \text{ and } u", 0, \infty$$

$$"g(x)", -\ln(x), "base", \frac{1}{2}\sqrt{2}\ \sqrt{\frac{a\sim}{\pi x^3}}\ e^{-\frac{1}{2}\ \frac{a\sim (x - b\sim)^2}{b\sim^2 x}}, "InverseGaussianRV(a,b)"$$

$$"f(x)", \frac{1}{2}\ \frac{\sqrt{2}\ \sqrt{a\sim}\ e^{-\frac{1}{2}\ \frac{e^{x} a\sim b\sim^2 - 2\,a\sim b\sim - x b\sim^2 + e^{-x} a\sim}{b\sim^2}}}{\sqrt{\pi}}$$

"i is", 9,

" ----------"

$$g := t \to \ln(t + 1)$$

$$l := 0$$

$$u := \infty$$

$$Temp := \left[\left[y\sim \right.\right.$$

$$\left. \to \frac{1}{2}\ \frac{1}{\sqrt{\pi}\ |e^{y\sim} - 1|}\left(\sqrt{2}\ \sqrt{a\sim}\ \sqrt{\frac{1}{e^{y\sim} - 1}}\right.\right.$$

$$\left.\left. e^{-\frac{1}{2}\ \frac{-2\,y\sim b\sim^2 e^{y\sim} + a\sim e^{2\,y\sim} - 2\,e^{y\sim} a\sim b\sim + a\sim b\sim^2 + 2\,y\sim b\sim^2 - 2\,e^{y\sim} a\sim + 2\,a\sim b\sim + a\sim}{b\sim^2 (e^{y\sim} - 1)}}\right)\right], [0, \infty],$$

$$\left.["Continuous", "PDF"]\right]$$

$$"l \text{ and } u", 0, \infty$$

$$"g(x)", \ln(x + 1), "base", \frac{1}{2}\sqrt{2}\ \sqrt{\frac{a\sim}{\pi x^3}}\ e^{-\frac{1}{2}\ \frac{a\sim (x - b\sim)^2}{b\sim^2 x}}, "InverseGaussianRV(a,b)"$$

"f(x)",

$$\frac{1}{2}\ \frac{1}{\sqrt{\pi}\ \left|e^{x}-1\right|}\left(\sqrt{2}\ \sqrt{a\sim}\ \sqrt{\frac{1}{e^{x}-1}}\ e^{-\frac{1}{2}\ \frac{-2\,x\,b\sim^{2}\,e^{x}+a\sim\,e^{2\,x}-2\,e^{x}a\sim\,b\sim+a\sim\,b\sim^{2}+2\,x\,b\sim^{2}-2\,e^{x}a\sim+2\,a\sim\,b\sim+a\sim}{b\sim^{2}\,(e^{x}-1)}}\right)$$

"i is", 10,

" ----------"

$$g := t \to \frac{1}{\ln(t+2)}$$

$$l := 0$$

$$u := \infty$$

$$Temp := \left[\left[\left[y\sim\right.\right.\right.$$

$$\to \frac{1}{2}\ \frac{1}{\sqrt{\pi}\ y\sim^{2}\left|e^{\frac{1}{y\sim}}-2\right|}\left(\sqrt{2}\ \sqrt{a\sim}\ \sqrt{\frac{1}{e^{\frac{1}{y\sim}}-2}}\ e^{-\frac{1}{2}\ \frac{e^{\frac{2}{y\sim}}\,a\sim y\sim-2\,e^{\frac{1}{y\sim}}\,a\sim b\sim y\sim+a\sim b\sim^{2}y\sim-4\,e^{\frac{1}{y\sim}}\,a\sim y\sim-2\,b\sim^{2}e^{\frac{1}{y\sim}}+4\,a\sim b\sim y\sim+4\,a\sim y\sim+4\,b\sim^{2}}{b\sim^{2}\left(e^{\frac{1}{y\sim}}-2\right)y\sim}}\right)\right]\right.,\left[0,\right.$$

$$\left.\left.\left.\frac{1}{\ln(2)}\right],\ [\text{"Continuous"},\ \text{"PDF"}]\right.\right]$$

"l and u", 0, ∞

"g(x)", $\frac{1}{\ln(x+2)}$, "base", $\frac{1}{2}\ \sqrt{2}\ \sqrt{\frac{a\sim}{\pi\,x^{3}}}\ e^{-\frac{1}{2}\ \frac{a\sim\,(x-b\sim)^{2}}{b\sim^{2}x}}$, "InverseGaussianRV(a,b)"

"f(x)",

$$\frac{1}{2}\,\frac{1}{\sqrt{\pi}\,x^2\left|e^{\frac{1}{x}}-2\right|}\left(\sqrt{2}\,\sqrt{a\sim}\,\sqrt{\frac{1}{e^{\frac{1}{x}}-2}}\;e^{-\frac{1}{2}\,\frac{e^{\frac{2}{x}}\,a\sim x-2\,e^{\frac{1}{x}}\,a\sim b\sim x+a\sim b\sim^2 x-4\,e^{\frac{1}{x}}\,a\sim x-2\,b\sim^2 e^{\frac{1}{x}}+4\,a\sim b\sim x+4\,a\sim x+4\,b\sim^2}{b\sim^2\left(e^{\frac{1}{x}}-2\right)x}}\right)$$

"i is", 11,

" ----------"

$$g := t\to\tanh(t)$$
$$l := 0$$
$$u := \infty$$

$$Temp := \left[\left[\left[y\sim\to -\frac{1}{2}\,\frac{\sqrt{2}\,\sqrt{a\sim}\,\sqrt{\frac{1}{\operatorname{arctanh}(y\sim)^3}}\;e^{-\frac{1}{2}\,\frac{a\sim(\operatorname{arctanh}(y\sim)-b\sim)^2}{b\sim^2\operatorname{arctanh}(y\sim)}}}{\sqrt{\pi}\,\left(y\sim^2-1\right)}\right],\,[0,\,1],\right.$$

$$\left.["\text{Continuous}",\,"\text{PDF}"]\right]$$

"l and u", 0, ∞

"g(x)", $\tanh(x)$, "base", $\frac{1}{2}\,\sqrt{2}\,\sqrt{\frac{a\sim}{\pi\,x^3}}\;e^{-\frac{1}{2}\,\frac{a\sim(x-b\sim)^2}{b\sim^2 x}}$, "InverseGaussianRV(a,b)"

"f(x)", $-\frac{1}{2}\,\frac{\sqrt{2}\,\sqrt{a\sim}\,\sqrt{\frac{1}{\operatorname{arctanh}(x)^3}}\;e^{-\frac{1}{2}\,\frac{a\sim(\operatorname{arctanh}(x)-b\sim)^2}{b\sim^2\operatorname{arctanh}(x)}}}{\sqrt{\pi}\,\left(x^2-1\right)}$

"i is", 12,

" ----------"

$$g := t\to\sinh(t)$$
$$l := 0$$
$$u := \infty$$

$$Temp := \left[\left[y\sim \to \frac{1}{2}\ \frac{\sqrt{2}\ \text{signum}(y\sim)\ \sqrt{a\sim}\ \sqrt{\frac{1}{\text{arcsinh}(y\sim)}}\ e^{-\frac{1}{2}\ \frac{a\sim\ (\text{arcsinh}(y\sim)\ -b\sim)^2}{b\sim^2\ \text{arcsinh}(y\sim)}}}{\text{arcsinh}(y\sim)\ \sqrt{\pi}\ \sqrt{y\sim^2+1}}\right], [0, \infty], ["\text{Continuous}", "\text{PDF}"]\right]$$

"l and u", 0, ∞

"g(x)", $\sinh(x)$, "base", $\frac{1}{2}\ \sqrt{2}\ \sqrt{\frac{a\sim}{\pi\ x^3}}\ e^{-\frac{1}{2}\ \frac{a\sim\ (x-b\sim)^2}{b\sim^2\ x}}$, "InverseGaussianRV(a,b)"

"f(x)", $\frac{1}{2}\ \frac{\sqrt{2}\ \text{signum}(x)\ \sqrt{a\sim}\ \sqrt{\frac{1}{\text{arcsinh}(x)}}\ e^{-\frac{1}{2}\ \frac{a\sim\ (\text{arcsinh}(x)\ -b\sim)^2}{b\sim^2\ \text{arcsinh}(x)}}}{\text{arcsinh}(x)\ \sqrt{\pi}\ \sqrt{x^2+1}}$

"i is", 13,

" ----------"

$$g := t \to \text{arcsinh}(t)$$
$$l := 0$$
$$u := \infty$$

$$Temp := \left[\left[y\sim \to \frac{1}{2}\ \frac{\sqrt{2}\ \text{signum}(y\sim)\ \sqrt{a\sim}\ \sqrt{\frac{1}{\sinh(y\sim)}}\ e^{-\frac{1}{2}\ \frac{a\sim\ (\sinh(y\sim)\ -b\sim)^2}{b\sim^2\ \sinh(y\sim)}}\ \cosh(y\sim)}{\sinh(y\sim)\ \sqrt{\pi}}\right], [0, \infty], ["\text{Continuous}", "\text{PDF}"]\right]$$

"l and u", 0, ∞

"g(x)", $\text{arcsinh}(x)$, "base", $\frac{1}{2}\ \sqrt{2}\ \sqrt{\frac{a\sim}{\pi\ x^3}}\ e^{-\frac{1}{2}\ \frac{a\sim\ (x-b\sim)^2}{b\sim^2\ x}}$, "InverseGaussianRV(a,b)"

"f(x)", $\frac{1}{2}\ \frac{\sqrt{2}\ \text{signum}(x)\ \sqrt{a\sim}\ \sqrt{\frac{1}{\sinh(x)}}\ e^{-\frac{1}{2}\ \frac{a\sim\ (\sinh(x)\ -b\sim)^2}{b\sim^2\ \sinh(x)}}\ \cosh(x)}{\sinh(x)\ \sqrt{\pi}}$

"i is", 14,

" ----------"

$$g := t \to \operatorname{csch}(t+1)$$

$$l := 0$$

$$u := \infty$$

$$Temp := \left[\left[y\sim \to \frac{1}{2}\ \frac{\sqrt{2}\ \sqrt{a\sim}\ \sqrt{\frac{1}{(-1+\operatorname{arccsch}(y\sim))^3}}\ e^{-\frac{1}{2}\ \frac{a\sim\,(-1+\operatorname{arccsch}(y\sim)-b\sim)^2}{b\sim^2\,(-1+\operatorname{arccsch}(y\sim))}}}{\sqrt{\pi}\ \sqrt{y\sim^2+1}\ |y\sim|}\right], \left[0, \frac{2}{e-e^{-1}}\right], \left["\text{Continuous}", "\text{PDF}"\right]\right]$$

"l and u", 0, ∞

$$\text{"g(x)"}, \operatorname{csch}(x+1), \text{"base"}, \frac{1}{2}\ \sqrt{2}\ \sqrt{\frac{a\sim}{\pi\,x^3}}\ e^{-\frac{1}{2}\ \frac{a\sim\,(x-b\sim)^2}{b\sim^2\,x}}, \text{"InverseGaussianRV(a,b)"}$$

$$\text{"f(x)"}, \frac{1}{2}\ \frac{\sqrt{2}\ \sqrt{a\sim}\ \sqrt{\frac{1}{(-1+\operatorname{arccsch}(x))^3}}\ e^{-\frac{1}{2}\ \frac{a\sim\,(-1+\operatorname{arccsch}(x)-b\sim)^2}{b\sim^2\,(-1+\operatorname{arccsch}(x))}}}{\sqrt{\pi}\ \sqrt{x^2+1}\ |x|}$$

"i is", 15,

" ----------"

$$g := t \to \operatorname{arccsch}(t+1)$$

$$l := 0$$

$$u := \infty$$

$$Temp := \left[\left[y\sim \to \frac{1}{2}\ \frac{1}{\sinh(y\sim)\ \sqrt{\pi}\ |\sinh(y\sim)-1|}\left(\sqrt{2}\ \operatorname{signum}(y\sim)\ \sqrt{a\sim}\ \sqrt{-\frac{\sinh(y\sim)}{\sinh(y\sim)-1}}\ e^{\frac{1}{2}\ \frac{a\sim\,(b\sim\sinh(y\sim)+\sinh(y\sim)-1)^2}{\sinh(y\sim)\,b\sim^2\,(\sinh(y\sim)-1)}}\ \cosh(y\sim)\right)\right], \left[0, \ln\left(1+\sqrt{2}\right)\right], \left["\text{Continuous}", "\text{PDF}"\right]\right]$$

"l and u", 0, ∞

$$\text{"g(x)"}, \operatorname{arccsch}(x+1), \text{"base"}, \frac{1}{2}\ \sqrt{2}\ \sqrt{\frac{a\sim}{\pi\,x^3}}\ e^{-\frac{1}{2}\ \frac{a\sim\,(x-b\sim)^2}{b\sim^2\,x}}, \text{"InverseGaussianRV(a,b)"}$$

$$\text{"f(x)"},\ \frac{1}{2}\ \frac{\sqrt{2}\ \text{signum}(x)\ \sqrt{a\sim}\ \sqrt{-\frac{\sinh(x)}{\sinh(x)-1}}\ e^{\frac{1}{2}\ \frac{a\sim\,(b\sim\sinh(x)\ +\sinh(x)\ -1)^2}{\sinh(x)\ b\sim^2\,(\sinh(x)\ -1)}}\ \cosh(x)}{\sinh(x)\ \sqrt{\pi}\ |\sinh(x)\ -1|}$$

"i is", 16,

" ----------"

$$g := t \to \frac{1}{\tanh(t+1)}$$

$$l := 0$$

$$u := \infty$$

$$Temp := \left[\left[\left[y\sim \to \frac{\sqrt{2}\ \sqrt{a\sim}\ \sqrt{\frac{1}{\left(-1+\text{arctanh}\left(\frac{1}{y\sim}\right)\right)^3}}\ e^{-\frac{1}{2}\ \frac{a\sim\left(-1+\text{arctanh}\left(\frac{1}{y\sim}\right)-b\sim\right)^2}{b\sim^2\left(-1+\text{arctanh}\left(\frac{1}{y\sim}\right)\right)}}}{\sqrt{\pi}\ \left(y\sim^2-1\right)}\right], \left[1, \frac{e+e^{-1}}{e-e^{-1}}\right]\right], [\text{"Continuous"}, \text{"PDF"}]\right]$$

"l and u", 0, ∞

$$\text{"g(x)"},\ \frac{1}{\tanh(x+1)},\ \text{"base"},\ \frac{1}{2}\ \sqrt{2}\ \sqrt{\frac{a\sim}{\pi\,x^3}}\ e^{-\frac{1}{2}\ \frac{a\sim\,(x-b\sim)^2}{b\sim^2 x}},\ \text{"InverseGaussianRV(a,b)"}$$

$$\text{"f(x)"},\ \frac{1}{2}\ \frac{\sqrt{2}\ \sqrt{a\sim}\ \sqrt{\frac{1}{\left(-1+\text{arctanh}\left(\frac{1}{x}\right)\right)^3}}\ e^{-\frac{1}{2}\ \frac{a\sim\left(-1+\text{arctanh}\left(\frac{1}{x}\right)-b\sim\right)^2}{b\sim^2\left(-1+\text{arctanh}\left(\frac{1}{x}\right)\right)}}}{\sqrt{\pi}\ \left(x^2-1\right)}$$

"i is", 17,

" ----------"

$$g := t \to \frac{1}{\sinh(t+1)}$$

$$l := 0$$

$$u := \infty$$

$$Temp := \left[\left[\left[y\sim \right.\right.\right.$$

$$\to \frac{1}{2}\ \frac{1}{\sqrt{\pi}\ \sqrt{y\sim^2+1}}\left(\sqrt{2}\ \sqrt{a\sim}\ \sqrt{\frac{1}{-1+\operatorname{arcsinh}\left(\frac{1}{y\sim}\right)}}\ e^{-\frac{1}{2}\ \frac{a\sim\left(-1+\operatorname{arcsinh}\left(\frac{1}{y\sim}\right)-b\sim\right)^2}{b\sim^2\left(-1+\operatorname{arcsinh}\left(\frac{1}{y\sim}\right)\right)}}\right.$$

$$\left.\left.\left.\left|\frac{1}{y\sim\left(-1+\operatorname{arcsinh}\left(\frac{1}{y\sim}\right)\right)}\right|\right)\right]\right], \left[0,\ \frac{2}{e-e^{-1}}\right], \text{["Continuous", "PDF"]}\right]$$

"l and u", 0, ∞

"g(x)", $\frac{1}{\sinh(x+1)}$, "base", $\frac{1}{2}\sqrt{2}\ \sqrt{\frac{a\sim}{\pi x^3}}\ e^{-\frac{1}{2}\ \frac{a\sim(x-b\sim)^2}{b\sim^2 x}}$, "InverseGaussianRV(a,b)"

"f(x)",

$$\frac{1}{2}\ \frac{1}{\sqrt{\pi}\ \sqrt{x^2+1}}\left(\sqrt{2}\ \sqrt{a\sim}\ \sqrt{\frac{1}{-1+\operatorname{arcsinh}\left(\frac{1}{x}\right)}}\right.$$

$$e^{-\frac{1}{2}\ \frac{a\sim\left(-1+\operatorname{arcsinh}\left(\frac{1}{x}\right)-b\sim\right)^2}{b\sim^2\left(-1+\operatorname{arcsinh}\left(\frac{1}{x}\right)\right)}}\ \left.\left|1\ /\ \left(x\left(-1+\operatorname{arcsinh}\left(\frac{1}{x}\right)\right)\right)\right|\right)$$

"i is", 18,

" ----------"

$$g := t \to \frac{1}{\operatorname{arcsinh}(t+1)}$$

$$l := 0$$

$$u := \infty$$

$$Temp := \left[\left[y\sim \rightarrow \frac{1}{2} \frac{\sqrt{2}\,\sqrt{a\sim}\,\sqrt{\frac{1}{-1+\sinh\left(\frac{1}{y\sim}\right)}}\; e^{-\frac{1}{2}\frac{a\sim\left(-1+\sinh\left(\frac{1}{y\sim}\right)-b\sim\right)^2}{b\sim^2\left(-1+\sinh\left(\frac{1}{y\sim}\right)\right)}}\cosh\left(\frac{1}{y\sim}\right)}{\sqrt{\pi}\,y\sim^2\left|-1+\sinh\left(\frac{1}{y\sim}\right)\right|}, \left[0, \frac{1}{\ln\left(1+\sqrt{2}\right)}\right], \text{["Continuous", "PDF"]}\right]$$

"l and u", 0, ∞

"g(x)", $\frac{1}{\operatorname{arcsinh}(x+1)}$, "base", $\frac{1}{2}\sqrt{2}\sqrt{\frac{a\sim}{\pi x^3}}\; e^{-\frac{1}{2}\frac{a\sim(x-b\sim)^2}{b\sim^2 x}}$, "InverseGaussianRV(a,b)"

"f(x)", $\frac{1}{2}\frac{\sqrt{2}\,\sqrt{a\sim}\,\sqrt{\frac{1}{-1+\sinh\left(\frac{1}{x}\right)}}\; e^{-\frac{1}{2}\frac{a\sim\left(-1+\sinh\left(\frac{1}{x}\right)-b\sim\right)^2}{b\sim^2\left(-1+\sinh\left(\frac{1}{x}\right)\right)}}\cosh\left(\frac{1}{x}\right)}{\sqrt{\pi}\,x^2\left|-1+\sinh\left(\frac{1}{x}\right)\right|}$

"i is", 19,

" ----------"

$$g := t \rightarrow \frac{1}{\operatorname{csch}(t)} + 1$$

$$l := 0$$

$$u := \infty$$

$$Temp := \left[\left[y\sim \to \frac{1}{2}\ \frac{\sqrt{2}\ \sqrt{a\sim}\ \sqrt{\frac{1}{\operatorname{arccsch}\left(\frac{1}{y\sim - 1}\right)^3}}\ e^{-\frac{1}{2}\ \frac{a\sim \left(\operatorname{arccsch}\left(\frac{1}{y\sim - 1}\right) - b\sim\right)^2}{b\sim^2 \operatorname{arccsch}\left(\frac{1}{y\sim - 1}\right)}}}{\sqrt{\pi}\ \sqrt{y\sim^2 - 2\, y\sim + 2}} \right], [1,\ \infty\ ], ["Continuous", "PDF"]\right]$$

"l and u", 0, ∞

"g(x)", $\frac{1}{\operatorname{csch}(x)} + 1$, "base", $\frac{1}{2}\sqrt{2}\ \sqrt{\frac{a\sim}{\pi\, x^3}}\ e^{-\frac{1}{2}\ \frac{a\sim (x - b\sim)^2}{b\sim^2 x}}$, "InverseGaussianRV(a,b)"

"f(x)", $\frac{1}{2}\ \frac{\sqrt{2}\ \sqrt{a\sim}\ \sqrt{\frac{1}{\operatorname{arccsch}\left(\frac{1}{x - 1}\right)^3}}\ e^{-\frac{1}{2}\ \frac{a\sim \left(\operatorname{arccsch}\left(\frac{1}{x - 1}\right) - b\sim\right)^2}{b\sim^2 \operatorname{arccsch}\left(\frac{1}{x - 1}\right)}}}{\sqrt{\pi}\ \sqrt{x^2 - 2\, x + 2}}$

"i is", 20,

" ----------"

$$g := t \to \tanh\left(\frac{1}{t}\right)$$

$$l := 0$$

$$u := \infty$$

$$Temp := \left[\left[y\sim \to -\frac{1}{2}\ \frac{\sqrt{2}\ \sqrt{a\sim}\ \sqrt{\operatorname{arctanh}(y\sim)^3}\ e^{-\frac{1}{2}\ \frac{a\sim (b\sim \operatorname{arctanh}(y\sim) - 1)^2}{\operatorname{arctanh}(y\sim)\, b\sim^2}}}{\sqrt{\pi}\ \operatorname{arctanh}(y\sim)^2\ (y\sim^2 - 1)} \right], [0, 1],\ ["Continuous", "PDF"]\right]$$

"l and u", 0, ∞

"g(x)", $\tanh\left(\frac{1}{x}\right)$, "base", $\frac{1}{2}\sqrt{2}\ \sqrt{\frac{a\sim}{\pi\, x^3}}\ e^{-\frac{1}{2}\ \frac{a\sim (x - b\sim)^2}{b\sim^2 x}}$, "InverseGaussianRV(a,b)"

$$\text{"f(x)"},\ -\frac{1}{2}\ \frac{\sqrt{2}\ \sqrt{a\sim}\ \sqrt{\operatorname{arctanh}(x)^3}\ e^{-\frac{1}{2}\ \frac{a\sim\,(b\sim \operatorname{arctanh}(x)\ -\ 1)^2}{\operatorname{arctanh}(x)\ b\sim^2}}}{\sqrt{\pi}\ \operatorname{arctanh}(x)^2\ \left(x^2-1\right)}$$

"i is", 21,

" ----------"

$$g := t \to \operatorname{csch}\left(\frac{1}{t}\right)$$

$$l := 0$$

$$u := \infty$$

$$Temp := \left[\left[y\sim \to \frac{1}{2}\ \frac{\sqrt{2}\ \sqrt{a\sim}\ \sqrt{\operatorname{arccsch}(y\sim)^3}\ e^{-\frac{1}{2}\ \frac{a\sim\,(b\sim \operatorname{arccsch}(y\sim)\ -\ 1)^2}{\operatorname{arccsch}(y\sim)\ b\sim^2}}}{\sqrt{\pi}\ \sqrt{y\sim^2+1}\ \operatorname{arccsch}(y\sim)^2\ |y\sim|}\right], [0,\ \infty],\right.$$

$$\left.[\text{"Continuous"}, \text{"PDF"}]\right]$$

$$\text{"l and u"},\ 0,\ \infty$$

$$\text{"g(x)"}, \operatorname{csch}\left(\frac{1}{x}\right), \text{"base"}, \frac{1}{2}\ \sqrt{2}\ \sqrt{\frac{a\sim}{\pi\, x^3}}\ e^{-\frac{1}{2}\ \frac{a\sim\,(x-b\sim)^2}{b\sim^2 x}}, \text{"InverseGaussianRV(a,b)"}$$

$$\text{"f(x)"},\ \frac{1}{2}\ \frac{\sqrt{2}\ \sqrt{a\sim}\ \sqrt{\operatorname{arccsch}(x)^3}\ e^{-\frac{1}{2}\ \frac{a\sim\,(b\sim \operatorname{arccsch}(x)\ -\ 1)^2}{\operatorname{arccsch}(x)\ b\sim^2}}}{\sqrt{\pi}\ \sqrt{x^2+1}\ \operatorname{arccsch}(x)^2\ |x|}$$

"i is", 22,

" ----------"

$$g := t \to \operatorname{arccsch}\left(\frac{1}{t}\right)$$

$$l := 0$$

$$u := \infty$$

$$Temp := \left[\left[y\sim \to \frac{1}{2}\ \frac{\sqrt{2}\ \operatorname{signum}(y\sim)\ \sqrt{a\sim}\ \sqrt{\frac{1}{\sinh(y\sim)}}\ e^{-\frac{1}{2}\ \frac{a\sim\,(-b\sim\ +\ \sinh(y\sim))^2}{b\sim^2 \sinh(y\sim)}}\ \cosh(y\sim)}{\sinh(y\sim)\ \sqrt{\pi}}\right],\right.$$

$$\left.[0,\ \infty], [\text{"Continuous"}, \text{"PDF"}]\right]$$

$$\text{"l and u"},\ 0,\ \infty$$

$$\text{"g(x)"}, \operatorname{arccsch}\left(\frac{1}{x}\right), \text{"base"}, \frac{1}{2}\sqrt{2}\sqrt{\frac{a\sim}{\pi x^3}}\, e^{-\frac{1}{2}\frac{a\sim (x-b\sim)^2}{b\sim^2 x}}, \text{"InverseGaussianRV(a,b)"}$$

$$\text{"f(x)"}, \frac{1}{2}\frac{\sqrt{2}\ \operatorname{signum}(x)\sqrt{a\sim}\sqrt{\frac{1}{\sinh(x)}}\, e^{-\frac{1}{2}\frac{a\sim(\sinh(x)-b\sim)^2}{b\sim^2\sinh(x)}}\cosh(x)}{\sinh(x)\sqrt{\pi}} \tag{1}$$