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[> restart : assume(f > 0, a > 0, m > 2) :
[> psi := (m - 1) · am-1 / (a + u)m : #generalized Pareto distribution for u=sqrt(beta)
[=
[> G := simplify(integrate(u · psi · exp(-f · u), u = 0 ..infinity));
G := - 1 / (a~2 f~3) ( (m~ - 1) (Γ(-1 - m~, a~ f~) f~2+m~ ea~ f~ a~2+m~ m~2 + Γ(-1 - m~,
(1)
a~ f~) f~2+m~ ea~ f~ a~2+m~ m~ + Γ(-1 - m~, a~ f~) f~1+m~ ea~ f~ a~1+m~ m~3
- a~1+m~ m~ f~1+m~ ea~ f~ Γ(-1 - m~, a~ f~) - a~ f~ - m~2 + m~) )
[=
[> C := (1 - pbar) · integrate(u · psi, u = 0 ..infinity);
C := (1 - pbar) a~ / (m~ - 2) (2)
[=
[> w := 100 · (1 - integrate(psi · exp(-f · u), u = 0 ..infinity));
w := 100 - 100 (a~ f~)m~-1 (m~ - 1) ea~ f~ Γ(1 - m~, a~ f~) (3)
[=
[>
[>

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