Mathematica 7 Indefinite Integration Test Result Summary

Integration function: Mathematica's built-in Integrate function

Time and date of test: 12:27   09 June 2010

Mathematica version: 7.0 for Microsoft Windows (64-bit) (February 18, 2009)

Largest result size: 277 964 leaves   Optimal size: 138 leaves   Integrand: $\mathrm{Cot}[x]\sqrt{a + b\,\mathrm{Cot}[x]^2 + c\,\mathrm{Cot}[x]^4}$

Longest compute time: 59.078 seconds   Result size: 10 558 leaves   Integrand: $\left(-\sqrt{b^2 + c^2} + b\,\mathrm{Cos}[x] + c\,\mathrm{Sin}[x]\right)^{5/2}$

File	Optimal	Nonidentical	Nonintegrable	Timeouts	Incorrect	Total	Integrals/sec
RationalFunctionsOfLinears	324	23	0	0	0	347	13.5
RationalFunctionsOfBinomials	585	32	0	0	1	618	22.8
RationalFunctionsOfTrinomials	704	68	8	0	0	780	15.5
AlgebraicFunctionsOfLinears	608	24	0	0	0	632	13.1
AlgebraicFunctionsOfBinomials	644	50	31	0	3	728	16.1
AlgebraicFunctionsOfTrinomials	511	20	8	0	7	546	9.39
ExponentialFunctions	548	15	15	0	14	592	12.2
LogarithmFunctions	628	32	22	0	0	682	10.
SineFunctions	309	45	0	0	2	356	1.56
CosineFunctions	318	24	0	0	1	343	1.6
TangentFunctions	111	13	0	0	0	124	0.347
CotangentFunctions	108	12	0	0	0	120	0.689
SecantFunctions	91	27	1	0	3	122	0.941
CosecantFunctions	95	20	0	0	4	119	1.09
TwoTrigFunctions	729	212	2	6	50	999	0.535
TrigFunctions	339	49	0	0	14	402	0.679
sin(x)^m (a+a sin(x))^n	52	21	0	0	0	73	1.79
sin(x)^m (a+b sin(x))^n	63	4	0	0	0	67	0.234
cos(x)^m (b cos(x))^n	405	22	0	0	0	427	1.5
cos(x)^m (a+a cos(x))^n	660	630	0	47	205	1542	0.277
cos(x)^m (a+b cos(x))^n	870	152	14	3	400	1439	0.134
sec(x)^m (b sec(x))^n	122	17	0	0	0	139	1.2
sec(x)^m (a+a sec(x))^n	621	598	0	0	248	1467	0.242
sec(x)^m (a+b sec(x))^n	482	222	106	52	231	1093	0.109
csc(x)^m (a+a csc(x))^n	14	7	0	0	2	23	0.349

csc(x)^m (a+b csc(x))^n	12	4	0	0	0	16	1.4
HyperbolicSineFunctions	289	32	0	0	0	321	1.36
HyperbolicCosineFunctions	310	22	0	0	0	332	1.43
HyperbolicTangentFunctions	83	6	0	0	0	89	0.848
HyperbolicCotangentFunctions	79	10	0	0	0	89	0.813
HyperbolicSecantFunctions	105	13	0	0	2	120	1.65
HyperbolicCosecantFunctions	94	23	0	0	2	119	0.957
TwoHyperbolicFunctions	940	153	7	11	9	1120	0.933
HyperbolicFunctions	194	34	2	7	4	241	0.794
InverseSineFunctions	189	5	3	0	0	197	1.49
InverseCosineFunctions	73	3	1	0	0	77	13.2
InverseTangentFunctions	107	9	8	1	0	125	2.57
InverseCotangentFunctions	87	8	6	0	0	101	6.25
InverseSecantFunctions	25	3	0	0	0	28	7.07
InverseCosecantFunctions	28	3	0	0	0	31	7.5
InverseHyperbolicSineFunctions	49	2	1	0	0	52	13.4
InverseHyperbolicCosineFunctions	50	2	1	0	0	53	9.11
InverseHyperbolicTangentFunctions	458	27	6	0	0	491	3.28
InverseHyperbolicCotangentFunctions	163	22	4	0	1	190	6.
InverseHyperbolicSecantFunctions	27	1	1	0	1	30	5.6
InverseHyperbolicCosecantFunctions	33	2	0	0	0	35	10.9
ErrorFunctions	75	0	39	0	0	114	37.7
FresnelIntegralFunctions	102	0	24	0	0	126	19.3
ExponentialIntegralFunctions	38	0	4	0	0	42	26.7
TrigIntegralFunctions	93	2	8	0	0	103	2.26
HyperbolicIntegralFunctions	90	4	8	0	0	102	0.423
LogarithmIntegralFunctions	3	0	0	0	0	3	39.
GammaFunctions	16	0	4	1	0	21	28.1
ZetaFunctions	12	0	2	0	0	14	100.
PolylogarithmFunctions	13	0	5	0	0	18	50.1
ProductLogarithmFunctions	249	0	147	0	0	396	40.1
ContributedProblems	142	22	13	0	3	180	3.86
TOTALS	14169	2751	501	128	1207	18756	0.464
PERCENTAGES	75.5%	14.7%	2.67%	0.682%	6.44%	100.%	