Mathematica 11.3 Integration Test Results

Test results for the 33 problems in "6.2.4 (d+e x)^m cosh(a+b x+c x^2)^n.m"

Problem 19: Attempted integration timed out after 120 seconds.

$$\int \frac{\text{Cosh}\left[a + b\,x + c\,x^2\right]^2}{x}\,dx$$

Optimal (type 8, 33 leaves, 2 steps):

$$\frac{\text{Log}[x]}{2} + \frac{1}{2}\,\text{Int}\left[\frac{\text{Cosh}\left[2\,a + 2\,b\,x + 2\,c\,x^2\right]}{x}, x\right]$$

Result (type 1, 1 leaves):

???

Problem 23: Attempted integration timed out after 120 seconds.

$$\int \frac{\text{Cosh}\left[a + b\,x - c\,x^2\right]^2}{x}\,dx$$
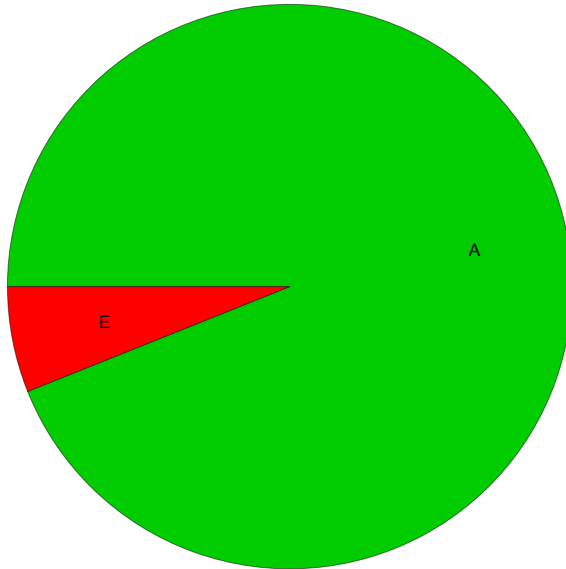
Optimal (type 8, 33 leaves, 2 steps):

$$\frac{\text{Log}[x]}{2} + \frac{1}{2}\,\text{Int}\left[\frac{\text{Cosh}\left[2\,a + 2\,b\,x - 2\,c\,x^2\right]}{x}, x\right]$$

Result (type 1, 1 leaves):

???

Summary of Integration Test Results

33 integration problems

A - 31 optimal antiderivatives

B - 0 more than twice size of optimal antiderivatives

C - 0 unnecessarily complex antiderivatives

D - 0 unable to integrate problems

E - 2 integration timeouts