## NEW FORMULA 3.511.10

The original formula is

$$\int_0^\infty \frac{\sinh ax \, \sinh bx}{\cosh^2 bx} \, dx = \frac{\pi a}{2b^2} \sec \frac{\pi a}{2b}$$

The change of variables $t = bx$ and replacing $a/b$ by $a$ yields the new formula (going back to $x$ as the integration variable)

$$\int_0^\infty \frac{\sinh ax \, \sinh x}{\cosh^2 x} \, dx = \frac{\pi a}{2} \sec \frac{\pi a}{2}$$