

NEW FORMULA 3.244.3

The original formula is

$$\int_0^1 \frac{x^{\nu-1} - x^{\mu-1}}{1 - x^\nu} dx = \frac{1}{\nu} \left[\mathbf{C} + \psi \left(\frac{\mu}{\nu} \right) \right]$$

This looks better if written as

$$\int_0^1 \frac{x^{a-1} - x^{b-1}}{1 - x^a} dx = \frac{1}{a} \left[\gamma + \psi \left(\frac{b}{a} \right) \right]$$