

FORMULA 4.257.1

$$\int_0^\infty \frac{x^\nu}{(x+b)(x+c)} \ln\left(\frac{x}{b}\right) dx = \frac{\pi}{(c-b)\sin\pi\nu} \left[c^\nu \ln\frac{c}{b} + \pi(b^\nu - c^\nu) \cot\pi\nu \right]$$