

FORMULA 4.267.31

$$\int_0^1 (1-x^p)(1-x^q)(1-x^r) \frac{x^{s-1} dx}{(1-x) \ln x} =$$
$$\ln \frac{\Gamma(p+s) \Gamma(q+s) \Gamma(r+s) \Gamma(p+q+r+s)}{\Gamma(p+q+s) \Gamma(p+r+s) \Gamma(q+r+s) \Gamma(s)}$$

$$p > 0, q > 0, r > 0, s > 0$$