

**FORMULA 3.197.12**

$$\int_0^1 \frac{x^{p-1/2} dx}{(1-x)^p (1-qx)^p} = \frac{\Gamma(p + \frac{1}{2})\Gamma(1-p) [(1-\sqrt{q})^{1-2p} - (1+\sqrt{q})^{1-2q}]}{\sqrt{\pi q} (2p-1)}$$