PROOF OF FORMULA 3.191.3

$$\int_0^1 x^{\nu-1}(1-x)^{\mu-1}\,dx = \int_0^1 x^{\mu-1}(1-x)^{\nu-1}\,dx = B(\mu,\nu)$$

The first expression is the standard definition of the **Beta function**. The second one comes from the change of variables $x \mapsto 1 - x$.