

RESEARCH GROUP IN MATHEMATICAL INEQUALITIES AND APPLICATIONS

PROBLEM CORNER

Problem 3, (2008)

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Let a, b be positive real numbers. Prove that

$$\int_0^1 t^{a-1}(1-t)^{b-1}\Gamma(t) dt \geq \frac{\Gamma(a)\Gamma(b)}{\Gamma(a+b)} \Gamma\left(\frac{a}{a+b}\right)$$

where $\Gamma(x)$ is the Euler Gamma Function.