

1 Funkciji Gama in Beta

$$\Gamma(z) = \int_0^{\infty} t^{z-1} e^{-t} dt$$

in

$$\beta(p, q) = \int_0^1 t^{p-1} (1-t)^{q-1} dt = \int_0^{\infty} \frac{t^p}{(1+t)^{p+q}} dt = 2 \int_0^{\pi/2} \sin^{2q-1} \varphi \cos^{2p-1} \varphi d\varphi$$

Velja

$$\Gamma\left(\frac{1}{2}\right) = \sqrt{\pi}$$

$$\Gamma(n) = (n-1)!$$

$$\beta(p, 1-p) = \frac{\pi}{\sin \pi p}$$