1. 
$$\Gamma(p) = \int_{0}^{+\infty} x^{p-1} e^{-x} dx$$
2. 
$$\Gamma(1) = 1$$
3. 
$$\Gamma(p) = (p-1) \Gamma(p-1)$$
4. 
$$\Gamma(n) = (n-1)!$$
5. 
$$\Gamma\left(\frac{1}{2}\right) = \sqrt{\pi}$$
6. 
$$\beta(p,q) = \frac{\Gamma(p) \Gamma(q)}{\Gamma(p+q)}$$

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