Calculation of π by Monte-Carlo algorithm

$n = 10000$

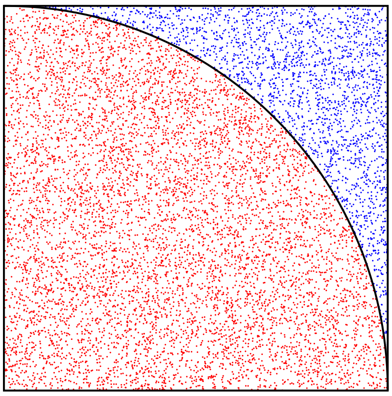
$= \mathbf{random}(\mathbf{fill}(\mathbf{vector}_{\mathrm{hp}}(n);\ 1)) = \mathbf{random}(\mathbf{fill}(\mathbf{vector}_{\mathrm{hp}}(10000);\ 1)) = [0.8462059\ \ 0.405761\ \ 0.2823039$
$0.6996727\ \ 0.601867\ \ 0.9563235\ \ 0.2116242\ \ 0.8234081\ \ 0.5102444\ \ 0.8767052\ \ 0.6949812\ \ 0.8912439\ \ 0.04396681$
$0.4665829\ \ 0.5270865\ \ 0.9039292\ \ 0.9530263\ \ 0.1797755\ \ 0.894481\ \ 0.5687781\ \ \ldots\ \ 0.706079]$

$= \mathbf{random}(\mathbf{fill}(\mathbf{Vector}_{\mathrm{hp}}(n);\ 1)) = \mathbf{random}(\mathbf{fill}(\mathbf{Vector}_{\mathrm{hp}}(10000);\ 1)) = [0.9303405\ \ 0.9746399\ \ 0.5287636$
$0.9840907\ \ 0.7006395\ \ 0.3512312\ \ 0.8141873\ \ 0.1313262\ \ 0.8584957\ \ 0.4996759\ \ 0.290746\ \ 0.4444213\ \ 0.9225536$
$0.2538623\ \ 0.7766397\ \ 0.301532\ \ 0.4533621\ \ 0.8840506\ \ 0.4981426\ \ 0.6202111\ \ \ldots\ \ 0.2500615]$

$= \sqrt{x^{\odot 2} + y^{\odot 2}} = [1.257616\ \ 1.05573\ \ 0.5994051\ \ 1.207467\ \ 0.9236556\ \ 1.018783\ \ 0.8412406\ \ 0.833815$
$0.9986812\ \ 1.009103\ \ 0.7533473\ \ 0.9959046\ \ 0.9236006\ \ 0.5311738\ \ 0.9386103\ \ 0.9528954\ \ 1.055366\ \ 0.9021445$
$1.023837\ \ 0.8415285\ \ \ldots\ \ 0.7490516]$

$n_{\mathrm{in}} = \mathbf{count}(\mathbf{floor}(r);\ 0;\ 1) = 7821$

PI = 4*n_in/n



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