

# Calculation of $\pi$ by Monte-Carlo algorithm

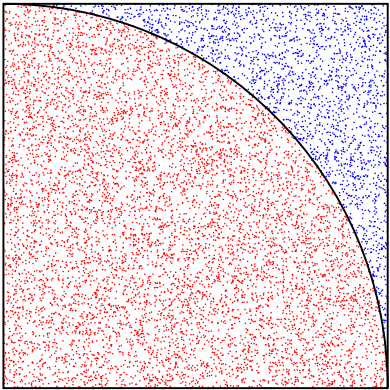
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n = 10000

x = random(fill(vector_hp(n); 1)) = random(fill(vector_hp(10000); 1)) = [0.9150824 0.2465905 0.6978289
0.3931293 0.867635 0.2746394 0.7019179 0.7649325 0.9339007 0.3569538 0.2710576 0.09302675 0.6179102
0.3135738 0.1989423 0.01957095 0.04963647 0.8618126 0.1196906 0.3954102 ... 0.5968447]

y = random(fill(Vector_hp(n); 1)) = random(fill(Vector_hp(10000); 1)) = [0.7805184 0.68976 0.2488817
0.1245719 0.8281453 0.3299011 0.3117345 0.416383 0.9679879 0.1157725 0.4855076 0.1650483 0.4046864
0.7227857 0.8108571 0.1838872 0.2506455 0.9130547 0.05461393 0.7979841 ... 0.2807092]

r = sqrt(x.^2 + y.^2) = [1.202741 0.7325133 0.7408828 0.412394 1.199423 0.4292569 0.7680281 0.870917
1.345054 0.3752589 0.5560484 0.1894596 0.7386367 0.7878754 0.8349056 0.1849257 0.2555131 1.255544
0.1315619 0.8905773 ... 0.6595615]

n_in = count(floor(r); 0; 1) = 7891 , PI = (4 * n_in) / n = (4 * 7891) / 10000 = 3.1564
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