

# 9. ČÍSELNÉ TABULKY

## 9.1 MATEMATICKÉ KONSTANTY

$\pi = 3,14159265358979323846264338327950288\dots,$	
$\log \pi = 0,497149872694133854351268\dots,$	
$\ln \pi = 1,14472988584940017414342735\dots,$	
$1/\pi = 0,3183098861837906715377675\dots,$	
$2\pi = 6,283185307$	$1/2\pi = 0,1591549431,$
$\pi/2 = 1,570796327,$	$2/\pi = 0,6366197724,$
$4\pi = 12,566370614,$	$1/4\pi = 0,0795774715,$
$4\pi/3 = 4,188790205,$	$3/4\pi = 0,2387324146,$
$\pi^2 = 9,869604401,$	$1/\pi^2 = 0,1013211836,$
$\pi^3 = 31,006276680,$	$1/\pi^3 = 0,0322515344,$
$\pi\sqrt{2} = 4,442882938,$	$1/\pi\sqrt{2} = 0,2250790790,$
$\sqrt{\pi} = 1,772453851,$	$1/\sqrt{\pi} = 0,5641895835,$
$\sqrt{2\pi} = 2,506628275,$	$1/\sqrt{2\pi} = 0,3989422804,$
$\sqrt{\pi/2} = 1,253314137,$	$1/\sqrt{\pi/2} = 0,7978845608,$
$\sqrt[3]{\pi} = 1,464591888,$	$1/\sqrt[3]{\pi} = 0,6827840633.$

$e = 2,718281828459045235360287471352662497757\dots,$	
$\mu = \log e = 0,434294481903251827651128918916605082294\dots,$	
$\mu' = \ln 10 = 2,302585092994045684017991454684364207601\dots,$	
<b>Převod dekadických a přirozených logaritmů:</b>	
$\log x = \log e \cdot \ln x = \mu \ln x, \mu = 1/\mu',$	
$\ln x = \ln 10 \cdot \log x = \mu' \log x,$	
$1/e = 0,367879441$	
$e^2 = 7,389056099$	$1/e^2 = 0,135335283,$
$\sqrt{e} = 1,648721271$	$1/\sqrt{e} = 0,606530660,$
$e^\pi = 23,140692633$	$1/e^\pi = 0,043213918,$
$e^{\pi/2} = 4,810447381$	$1/e^{\pi/2} = 0,207879576.$

## 9.2 MOCNINY, ODMOCNINY, OBVODY A OBSAHY KRUHŮ

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$n$	$n^2$	$\sqrt{n}$	$n^3$	$\sqrt[3]{n}$	$\pi n$	$\frac{1}{4}\pi n^2$
1	1	1,0000000	1	1,0000000	3,14159	0,785398
2	4	1,4142136	8	1,2599210	6,28319	3,141593
3	9	1,7320508	27	1,4422496	9,42478	7,068583
4	16	2,0000000	64	1,5874011	12,56637	12,566371
5	25	2,2360680	125	1,7099759	15,70796	19,634954
6	36	2,4494897	216	1,8171206	18,84956	28,274334
7	49	2,6457513	343	1,9129312	21,99115	38,484510
8	64	2,8284271	512	2,0000000	25,13274	50,265482
9	81	3,0000000	729	2,0800838	28,27433	63,617251
10	100	3,1622777	1000	2,1544347	31,41593	78,539816
11	121	3,3166248	1331	2,2239801	34,55752	95,033178
12	144	3,4641016	1728	2,2894285	37,69911	113,097336
13	169	3,6055513	2197	2,3513347	40,84070	132,732290
14	196	3,7416574	2744	2,4101423	43,98230	153,938040
15	225	3,8729833	3375	2,4662121	47,12389	176,714587
16	256	4,0000000	4096	2,5198421	50,26548	201,061930
17	289	4,1231056	4913	2,5712816	53,40708	226,980069
18	324	4,2426407	5832	2,6207414	56,54867	254,469005
19	361	4,3588989	6859	2,6684016	59,69026	283,528737
20	400	4,4721360	8000	2,7144176	62,83185	314,159265
21	441	4,5825757	9261	2,7589242	65,97345	346,360590
22	484	4,6904158	10648	2,8020393	69,11504	380,132711
23	529	4,7958315	12167	2,8438670	72,25663	415,475628
24	576	4,8989795	13824	2,8844991	75,39822	452,389342
25	625	5,0000000	15625	2,9240177	78,53982	490,873852
26	676	5,0990195	17576	2,9624961	81,68141	530,929158
27	729	5,1961524	19683	3,0000000	84,82300	572,555261
28	784	5,2915026	21952	3,0365890	87,96459	615,752160
29	841	5,3851648	24389	3,0723168	91,10619	660,519855
30	900	5,4772256	27000	3,1072325	94,24778	706,858347
31	961	5,5677644	29791	3,1413807	97,38937	754,767635
32	1024	5,6568542	32768	3,1748021	100,53096	804,247719
33	1089	5,7445626	35937	3,2075343	103,67256	855,298600
34	1156	5,8309519	39304	3,2396118	106,81415	907,920277
35	1225	5,9160798	42875	3,2710663	109,95574	962,112750
36	1296	6,0000000	46656	3,3019272	113,09734	1017,876020
37	1369	6,0827625	50653	3,3322219	116,23893	1075,210086
38	1444	6,1644140	54872	3,3619754	119,38052	1134,114948
39	1521	6,2449980	59319	3,3912114	122,52211	1194,590607
40	1600	6,3245553	64000	3,4199519	125,66371	1256,637061
41	1681	6,4031242	68921	3,4482172	128,80530	1320,254313
42	1764	6,4807407	74088	3,4760266	131,94689	1385,442360
43	1849	6,5574385	79507	3,5033981	135,08848	1452,201204
44	1936	6,6332496	85184	3,5303483	138,23008	1520,530844
45	2025	6,7082039	91125	3,5568933	141,37167	1590,431281
46	2116	6,7823300	97336	3,5830479	144,51326	1661,902514
47	2209	6,8556546	103823	3,6088261	147,65485	1734,944543
48	2304	6,9282032	110592	3,6342412	150,79645	1809,557368
49	2401	7,0000000	117649	3,6593057	153,93804	1885,740990
50	2500	7,0710678	125000	3,6840315	157,07963	1963,495408