

**Table of Bessel Functions**

| $\beta$ | $J_0(\beta)$ | $J_1(\beta)$ | $J_2(\beta)$ | $J_3(\beta)$ | $J_4(\beta)$ | $J_5(\beta)$ | $J_6(\beta)$ | $J_7(\beta)$ | $J_8(\beta)$ | $J_9(\beta)$ | $J_{10}(\beta)$ |
|---------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-----------------|
| 0       | 1            | 0            | 0            | 0            | 0            | 0            | 0            | 0            | 0            | 0            | 0               |
| 0.1     | 0.9975       | 0.0499       | 0.0012       | 0.0000       | 0.0000       | 0.0000       | 0.0000       | 0.0000       | 0.0000       | 0.0000       | 0.0000          |
| 0.2     | 0.9900       | 0.0995       | 0.0050       | 0.0002       | 0.0000       | 0.0000       | 0.0000       | 0.0000       | 0.0000       | 0.0000       | 0.0000          |
| 0.3     | 0.9776       | 0.1483       | 0.0112       | 0.0006       | 0.0000       | 0.0000       | 0.0000       | 0.0000       | 0.0000       | 0.0000       | 0.0000          |
| 0.4     | 0.9604       | 0.1960       | 0.0197       | 0.0013       | 0.0001       | 0.0000       | 0.0000       | 0.0000       | 0.0000       | 0.0000       | 0.0000          |
| 0.5     | 0.9385       | 0.2423       | 0.0306       | 0.0026       | 0.0002       | 0.0000       | 0.0000       | 0.0000       | 0.0000       | 0.0000       | 0.0000          |
| 0.6     | 0.9120       | 0.2867       | 0.0437       | 0.0044       | 0.0003       | 0.0000       | 0.0000       | 0.0000       | 0.0000       | 0.0000       | 0.0000          |
| 0.7     | 0.8812       | 0.3290       | 0.0588       | 0.0069       | 0.0006       | 0.0000       | 0.0000       | 0.0000       | 0.0000       | 0.0000       | 0.0000          |
| 0.8     | 0.8463       | 0.3688       | 0.0758       | 0.0102       | 0.0010       | 0.0001       | 0.0000       | 0.0000       | 0.0000       | 0.0000       | 0.0000          |
| 0.9     | 0.8075       | 0.4059       | 0.0946       | 0.0144       | 0.0016       | 0.0001       | 0.0000       | 0.0000       | 0.0000       | 0.0000       | 0.0000          |
| 1       | 0.7652       | 0.4401       | 0.1149       | 0.0196       | 0.0025       | 0.0002       | 0.0000       | 0.0000       | 0.0000       | 0.0000       | 0.0000          |
| 1.1     | 0.7196       | 0.4709       | 0.1366       | 0.0257       | 0.0036       | 0.0004       | 0.0000       | 0.0000       | 0.0000       | 0.0000       | 0.0000          |
| 1.2     | 0.6711       | 0.4983       | 0.1593       | 0.0329       | 0.0050       | 0.0006       | 0.0001       | 0.0000       | 0.0000       | 0.0000       | 0.0000          |
| 1.3     | 0.6201       | 0.5220       | 0.1830       | 0.0411       | 0.0068       | 0.0009       | 0.0001       | 0.0000       | 0.0000       | 0.0000       | 0.0000          |
| 1.4     | 0.5669       | 0.5419       | 0.2074       | 0.0505       | 0.0091       | 0.0013       | 0.0002       | 0.0000       | 0.0000       | 0.0000       | 0.0000          |
| 1.5     | 0.5118       | 0.5579       | 0.2321       | 0.0610       | 0.0118       | 0.0018       | 0.0002       | 0.0000       | 0.0000       | 0.0000       | 0.0000          |
| 1.6     | 0.4554       | 0.5699       | 0.2570       | 0.0725       | 0.0150       | 0.0025       | 0.0003       | 0.0000       | 0.0000       | 0.0000       | 0.0000          |
| 1.7     | 0.3980       | 0.5778       | 0.2817       | 0.0851       | 0.0188       | 0.0033       | 0.0005       | 0.0001       | 0.0000       | 0.0000       | 0.0000          |
| 1.8     | 0.3400       | 0.5815       | 0.3061       | 0.0988       | 0.0232       | 0.0043       | 0.0007       | 0.0001       | 0.0000       | 0.0000       | 0.0000          |
| 1.9     | 0.2818       | 0.5812       | 0.3299       | 0.1134       | 0.0283       | 0.0055       | 0.0009       | 0.0001       | 0.0000       | 0.0000       | 0.0000          |
| 2       | 0.2239       | 0.5767       | 0.3528       | 0.1289       | 0.0340       | 0.0070       | 0.0012       | 0.0002       | 0.0000       | 0.0000       | 0.0000          |
| 2.1     | 0.1666       | 0.5683       | 0.3746       | 0.1453       | 0.0405       | 0.0088       | 0.0016       | 0.0002       | 0.0000       | 0.0000       | 0.0000          |
| 2.2     | 0.1104       | 0.5560       | 0.3951       | 0.1623       | 0.0476       | 0.0109       | 0.0021       | 0.0003       | 0.0000       | 0.0000       | 0.0000          |
| 2.3     | 0.0555       | 0.5399       | 0.4139       | 0.1800       | 0.0556       | 0.0134       | 0.0027       | 0.0004       | 0.0001       | 0.0000       | 0.0000          |
| 2.4     | 0.0025       | 0.5202       | 0.4310       | 0.1981       | 0.0643       | 0.0162       | 0.0034       | 0.0006       | 0.0001       | 0.0000       | 0.0000          |
| 2.5     | -0.0484      | 0.4971       | 0.4461       | 0.2166       | 0.0738       | 0.0195       | 0.0042       | 0.0008       | 0.0001       | 0.0000       | 0.0000          |
| 2.6     | -0.0968      | 0.4708       | 0.4590       | 0.2353       | 0.0840       | 0.0232       | 0.0052       | 0.0010       | 0.0002       | 0.0000       | 0.0000          |
| 2.7     | -0.1424      | 0.4416       | 0.4696       | 0.2540       | 0.0950       | 0.0274       | 0.0065       | 0.0013       | 0.0002       | 0.0000       | 0.0000          |
| 2.8     | -0.1850      | 0.4097       | 0.4777       | 0.2727       | 0.1067       | 0.0321       | 0.0079       | 0.0016       | 0.0003       | 0.0000       | 0.0000          |
| 2.9     | -0.2243      | 0.3754       | 0.4832       | 0.2911       | 0.1190       | 0.0373       | 0.0095       | 0.0020       | 0.0004       | 0.0001       | 0.0000          |
| 3       | -0.2601      | 0.3391       | 0.4861       | 0.3091       | 0.1320       | 0.0430       | 0.0114       | 0.0025       | 0.0005       | 0.0001       | 0.0000          |
| 3.1     | -0.2921      | 0.3009       | 0.4862       | 0.3264       | 0.1456       | 0.0493       | 0.0136       | 0.0031       | 0.0006       | 0.0001       | 0.0000          |
| 3.2     | -0.3202      | 0.2613       | 0.4835       | 0.3431       | 0.1597       | 0.0562       | 0.0160       | 0.0038       | 0.0008       | 0.0001       | 0.0000          |
| 3.3     | -0.3443      | 0.2207       | 0.4780       | 0.3588       | 0.1743       | 0.0637       | 0.0188       | 0.0047       | 0.0010       | 0.0002       | 0.0000          |
| 3.4     | -0.3643      | 0.1792       | 0.4697       | 0.3734       | 0.1892       | 0.0718       | 0.0219       | 0.0056       | 0.0012       | 0.0002       | 0.0000          |
| 3.5     | -0.3801      | 0.1374       | 0.4586       | 0.3868       | 0.2044       | 0.0804       | 0.0254       | 0.0067       | 0.0015       | 0.0003       | 0.0001          |
| 3.6     | -0.3918      | 0.0955       | 0.4448       | 0.3988       | 0.2198       | 0.0897       | 0.0293       | 0.0080       | 0.0019       | 0.0004       | 0.0001          |
| 3.7     | -0.3992      | 0.0538       | 0.4283       | 0.4092       | 0.2353       | 0.0995       | 0.0336       | 0.0095       | 0.0023       | 0.0005       | 0.0001          |
| 3.8     | -0.4026      | 0.0128       | 0.4093       | 0.4180       | 0.2507       | 0.1098       | 0.0383       | 0.0112       | 0.0028       | 0.0006       | 0.0001          |
| 3.9     | -0.4018      | -0.0272      | 0.3879       | 0.4250       | 0.2661       | 0.1207       | 0.0435       | 0.0130       | 0.0034       | 0.0008       | 0.0002          |
| 4       | -0.3971      | -0.0660      | 0.3641       | 0.4302       | 0.2811       | 0.1321       | 0.0491       | 0.0152       | 0.0040       | 0.0009       | 0.0002          |
| 4.1     | -0.3887      | -0.1033      | 0.3383       | 0.4333       | 0.2958       | 0.1439       | 0.0552       | 0.0176       | 0.0048       | 0.0011       | 0.0002          |
| 4.2     | -0.3766      | -0.1386      | 0.3105       | 0.4344       | 0.3100       | 0.1561       | 0.0617       | 0.0202       | 0.0057       | 0.0014       | 0.0003          |
| 4.3     | -0.3610      | -0.1719      | 0.2811       | 0.4333       | 0.3236       | 0.1687       | 0.0688       | 0.0232       | 0.0067       | 0.0017       | 0.0004          |
| 4.4     | -0.3423      | -0.2028      | 0.2501       | 0.4301       | 0.3365       | 0.1816       | 0.0763       | 0.0264       | 0.0078       | 0.0020       | 0.0005          |
| 4.5     | -0.3205      | -0.2311      | 0.2178       | 0.4247       | 0.3484       | 0.1947       | 0.0843       | 0.0300       | 0.0091       | 0.0024       | 0.0006          |
| 4.6     | -0.2961      | -0.2566      | 0.1846       | 0.4171       | 0.3594       | 0.2080       | 0.0927       | 0.0340       | 0.0106       | 0.0029       | 0.0007          |
| 4.7     | -0.2693      | -0.2791      | 0.1506       | 0.4072       | 0.3693       | 0.2214       | 0.1017       | 0.0382       | 0.0122       | 0.0034       | 0.0008          |
| 4.8     | -0.2404      | -0.2985      | 0.1161       | 0.3952       | 0.3780       | 0.2347       | 0.1111       | 0.0429       | 0.0141       | 0.0040       | 0.0010          |
| 4.9     | -0.2097      | -0.3147      | 0.0813       | 0.3811       | 0.3853       | 0.2480       | 0.1209       | 0.0479       | 0.0161       | 0.0047       | 0.0012          |
| 5       | -0.1776      | -0.3276      | 0.0466       | 0.3648       | 0.3912       | 0.2611       | 0.1310       | 0.0534       | 0.0184       | 0.0055       | 0.0015          |