

Annexe 2: Tables statistiques

| Table | Notation, Fonction de masse | Valeurs tabulées | Équation dans Excel |
|----------------|---|--|---|
| Table 1 | $\mathbf{X} \sim \mathcal{B}(N, p)$ $f_{\mathbf{X}}(r) = \binom{N}{r} p^r (1-p)^{N-r}$ | $f_{\mathbf{X}}(r) = \Pr(\mathbf{X} = r)$ fct N (lignes) r (lignes) p (colonnes) | <code>=LOI.BINOMIALE(r ; N ; p ;)</code> |
| Table 2 | $\mathbf{X} \sim \mathcal{N}(0,1)$ $F_{\mathbf{X}}(z) = \int_{-\infty}^z \frac{1}{\sqrt{2\pi}\sigma} e^{-\frac{1}{2}\left(\frac{z-\mu}{\sigma}\right)^2} dz$ | $F_{\mathbf{X}}(z) = \Pr(\mathbf{X} \leq z)$ fct z (lignes) | <code>=LOI.NORMAL(z ; 0 ; 1 ; VRAI)</code> |
| Table 3 | $\mathbf{X} \sim \chi^2(\nu)$ $f_{\mathbf{X}}(z) = \frac{1}{2^{\frac{\nu}{2}} \Gamma\left(\frac{\nu}{2}\right)} z^{\frac{\nu}{2}-1} e^{-\frac{z}{2}}$ | z fct P = 1 - F _X (z) = Pr(X ≥ z) (colonne) ν (lignes) | <code>=KHIDEUX.INVERSE(P ; ν)</code> |
| Table 4 | $\mathbf{X} = \mathcal{F}(\nu_1, \nu_2)$ $f_{\mathbf{X}}(z) = \frac{(\frac{1}{2}N_{\mathbf{X}} + \frac{1}{2}N_{\mathbf{Y}} - 1)!}{(\frac{1}{2}N_{\mathbf{X}} - 1)! (\frac{1}{2}N_{\mathbf{Y}} - 1)!} \times \frac{z^{\frac{1}{2}N_{\mathbf{X}} - 1} \left(\frac{N_{\mathbf{Y}}}{N_{\mathbf{X}}}\right)^{\frac{1}{2}N_{\mathbf{X}} + \frac{1}{2}N_{\mathbf{Y}}}}{\left(z + \frac{N_{\mathbf{Y}}}{N_{\mathbf{X}}}\right)^{\frac{1}{2}N_{\mathbf{X}} + \frac{1}{2}N_{\mathbf{Y}}}}$ | z fct ν ₁ (lignes) ν ₂ (colonnes) étant donné P = 1 - F _X (z) = Pr(X ≥ z) = 0.05 | <code>=INVERSE.LOI.F(P ; ν₁ ; ν₂)</code> |
| Table 5 | $\mathbf{X} = t(\nu)$ $f_{\mathbf{X}}(z) = \frac{1}{\sqrt{\nu\pi}} \frac{\Gamma\left(\frac{\nu+1}{2}\right)}{\Gamma\left(\frac{\nu}{2}\right)} \left(1 + \frac{z^2}{\nu}\right)^{-\frac{\nu+1}{2}}$ | z fct P = 1 - F _X (z) = Pr(X ≥ z) (colonne) ν (lignes) | <code>=LOI.STUDENT.INVERSE(P*2 ; ν)</code> |
| Table 6 | $\mathbf{X} = t'(dl_e, \nu)$ | z fct dl _e (lignes) V (colonnes) étant donné P = 1 - F _X (z) = Pr(X ≥ z) = 0.05 | <code>Aucune formule dans Excel</code> |

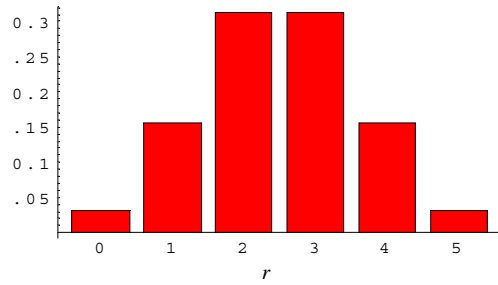
Table 1: Loi Binomiale

$$X \sim \text{Bin}(n, p)$$

$$f_X(r) = \binom{n}{r} p^r (1-p)^{n-r}$$

Cette table donne la probabilité d'obtenir r succès en N tirages étant donné une probabilité p de succès sur un tirage.

Par exemple, la probabilité d'obtenir 1 succès sur 5 tirages à pile ou face est de 0.1563.



| N | r | p | | | | | | | | | |
|---|---|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| | | 0.05 | 0.1 | 0.15 | 0.2 | 0.25 | 0.3 | 0.35 | 0.4 | 0.45 | 0.5 |
| 1 | 0 | 0.9500 | 0.9000 | 0.8500 | 0.8000 | 0.7500 | 0.7000 | 0.6500 | 0.6000 | 0.5500 | 0.5000 |
| | 1 | 0.0500 | 0.1000 | 0.1500 | 0.2000 | 0.2500 | 0.3000 | 0.3500 | 0.4000 | 0.4500 | 0.5000 |
| 2 | 0 | 0.9025 | 0.8100 | 0.7225 | 0.6400 | 0.5625 | 0.4900 | 0.4225 | 0.3600 | 0.3025 | 0.2500 |
| | 1 | 0.0950 | 0.1800 | 0.2550 | 0.3200 | 0.3750 | 0.4200 | 0.4550 | 0.4800 | 0.4950 | 0.5000 |
| | 2 | 0.0025 | 0.0100 | 0.0225 | 0.0400 | 0.0625 | 0.0900 | 0.1225 | 0.1600 | 0.2025 | 0.2500 |
| 3 | 0 | 0.8574 | 0.7290 | 0.6141 | 0.5120 | 0.4219 | 0.3430 | 0.2746 | 0.2160 | 0.1664 | 0.1250 |
| | 1 | 0.1354 | 0.2430 | 0.3251 | 0.3840 | 0.4219 | 0.4410 | 0.4436 | 0.4320 | 0.4084 | 0.3750 |
| | 2 | 0.0071 | 0.0270 | 0.0574 | 0.0960 | 0.1406 | 0.1890 | 0.2389 | 0.2880 | 0.3341 | 0.3750 |
| | 3 | 0.0001 | 0.0010 | 0.0034 | 0.0080 | 0.0156 | 0.0270 | 0.0429 | 0.0640 | 0.0911 | 0.1250 |
| 4 | 0 | 0.8145 | 0.6561 | 0.5220 | 0.4096 | 0.3164 | 0.2401 | 0.1785 | 0.1296 | 0.0915 | 0.0625 |
| | 1 | 0.1715 | 0.2916 | 0.3685 | 0.4096 | 0.4219 | 0.4116 | 0.3845 | 0.3456 | 0.2995 | 0.2500 |
| | 2 | 0.0135 | 0.0486 | 0.0975 | 0.1536 | 0.2109 | 0.2646 | 0.3105 | 0.3456 | 0.3675 | 0.3750 |
| | 3 | 0.0005 | 0.0036 | 0.0115 | 0.0256 | 0.0469 | 0.0756 | 0.1115 | 0.1536 | 0.2005 | 0.2500 |
| | 4 | 0.0000 | 0.0001 | 0.0005 | 0.0016 | 0.0039 | 0.0081 | 0.0150 | 0.0256 | 0.0410 | 0.0625 |
| 5 | 0 | 0.7738 | 0.5905 | 0.4437 | 0.3277 | 0.2373 | 0.1681 | 0.1160 | 0.0778 | 0.0503 | 0.0313 |
| | 1 | 0.2036 | 0.3281 | 0.3915 | 0.4096 | 0.3955 | 0.3602 | 0.3124 | 0.2592 | 0.2059 | 0.1563 |
| | 2 | 0.0214 | 0.0729 | 0.1382 | 0.2048 | 0.2637 | 0.3087 | 0.3364 | 0.3456 | 0.3369 | 0.3125 |
| | 3 | 0.0011 | 0.0081 | 0.0244 | 0.0512 | 0.0879 | 0.1323 | 0.1811 | 0.2304 | 0.2757 | 0.3125 |
| | 4 | 0.0000 | 0.0005 | 0.0022 | 0.0064 | 0.0146 | 0.0284 | 0.0488 | 0.0768 | 0.1128 | 0.1563 |
| | 5 | 0.0000 | 0.0000 | 0.0001 | 0.0003 | 0.0010 | 0.0024 | 0.0053 | 0.0102 | 0.0185 | 0.0313 |
| 6 | 0 | 0.7351 | 0.5314 | 0.3771 | 0.2621 | 0.1780 | 0.1176 | 0.0754 | 0.0467 | 0.0277 | 0.0156 |
| | 1 | 0.2321 | 0.3543 | 0.3993 | 0.3932 | 0.3560 | 0.3025 | 0.2437 | 0.1866 | 0.1359 | 0.0938 |
| | 2 | 0.0305 | 0.0984 | 0.1762 | 0.2458 | 0.2966 | 0.3241 | 0.3280 | 0.3110 | 0.2780 | 0.2344 |
| | 3 | 0.0021 | 0.0146 | 0.0415 | 0.0819 | 0.1318 | 0.1852 | 0.2355 | 0.2765 | 0.3032 | 0.3125 |
| | 4 | 0.0001 | 0.0012 | 0.0055 | 0.0154 | 0.0330 | 0.0595 | 0.0951 | 0.1382 | 0.1861 | 0.2344 |
| | 5 | 0.0000 | 0.0001 | 0.0004 | 0.0015 | 0.0044 | 0.0102 | 0.0205 | 0.0369 | 0.0609 | 0.0938 |
| | 6 | 0.0000 | 0.0000 | 0.0000 | 0.0001 | 0.0002 | 0.0007 | 0.0018 | 0.0041 | 0.0083 | 0.0156 |
| 7 | 0 | 0.6983 | 0.4783 | 0.3206 | 0.2097 | 0.1335 | 0.0824 | 0.0490 | 0.0280 | 0.0152 | 0.0078 |
| | 1 | 0.2573 | 0.3720 | 0.3960 | 0.3670 | 0.3115 | 0.2471 | 0.1848 | 0.1306 | 0.0872 | 0.0547 |
| | 2 | 0.0406 | 0.1240 | 0.2097 | 0.2753 | 0.3115 | 0.3177 | 0.2985 | 0.2613 | 0.2140 | 0.1641 |
| | 3 | 0.0036 | 0.0230 | 0.0617 | 0.1147 | 0.1730 | 0.2269 | 0.2679 | 0.2903 | 0.2918 | 0.2734 |
| | 4 | 0.0002 | 0.0026 | 0.0109 | 0.0287 | 0.0577 | 0.0972 | 0.1442 | 0.1935 | 0.2388 | 0.2734 |
| | 5 | 0.0000 | 0.0002 | 0.0012 | 0.0043 | 0.0115 | 0.0250 | 0.0466 | 0.0774 | 0.1172 | 0.1641 |
| | 6 | 0.0000 | 0.0000 | 0.0001 | 0.0004 | 0.0013 | 0.0036 | 0.0084 | 0.0172 | 0.0320 | 0.0547 |
| | 7 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0001 | 0.0002 | 0.0006 | 0.0016 | 0.0037 | 0.0078 |
| 8 | 0 | 0.6634 | 0.4305 | 0.2725 | 0.1678 | 0.1001 | 0.0576 | 0.0319 | 0.0168 | 0.0084 | 0.0039 |
| | 1 | 0.2793 | 0.3826 | 0.3847 | 0.3355 | 0.2670 | 0.1977 | 0.1373 | 0.0896 | 0.0548 | 0.0313 |
| | 2 | 0.0515 | 0.1488 | 0.2376 | 0.2936 | 0.3115 | 0.2965 | 0.2587 | 0.2090 | 0.1569 | 0.1094 |
| | 3 | 0.0054 | 0.0331 | 0.0839 | 0.1468 | 0.2076 | 0.2541 | 0.2786 | 0.2787 | 0.2568 | 0.2188 |
| | 4 | 0.0004 | 0.0046 | 0.0185 | 0.0459 | 0.0865 | 0.1361 | 0.1875 | 0.2322 | 0.2627 | 0.2734 |
| | 5 | 0.0000 | 0.0004 | 0.0026 | 0.0092 | 0.0231 | 0.0467 | 0.0808 | 0.1239 | 0.1719 | 0.2188 |
| | 6 | 0.0000 | 0.0000 | 0.0002 | 0.0011 | 0.0038 | 0.0100 | 0.0217 | 0.0413 | 0.0703 | 0.1094 |
| | 7 | 0.0000 | 0.0000 | 0.0000 | 0.0001 | 0.0004 | 0.0012 | 0.0033 | 0.0079 | 0.0164 | 0.0313 |
| | 8 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0001 | 0.0002 | 0.0007 | 0.0017 | 0.0039 |

Table 1 Binomiale

| N | r | p | | | | | | | | | |
|----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| | | 0.05 | 0.1 | 0.15 | 0.2 | 0.25 | 0.3 | 0.35 | 0.4 | 0.45 | 0.5 |
| 9 | 0 | 0.6302 | 0.3874 | 0.2316 | 0.1342 | 0.0751 | 0.0404 | 0.0207 | 0.0101 | 0.0046 | 0.0020 |
| | 1 | 0.2985 | 0.3874 | 0.3679 | 0.3020 | 0.2253 | 0.1556 | 0.1004 | 0.0605 | 0.0339 | 0.0176 |
| | 2 | 0.0629 | 0.1722 | 0.2597 | 0.3020 | 0.3003 | 0.2668 | 0.2162 | 0.1612 | 0.1110 | 0.0703 |
| | 3 | 0.0077 | 0.0446 | 0.1069 | 0.1762 | 0.2336 | 0.2668 | 0.2716 | 0.2508 | 0.2119 | 0.1641 |
| | 4 | 0.0006 | 0.0074 | 0.0283 | 0.0661 | 0.1168 | 0.1715 | 0.2194 | 0.2508 | 0.2600 | 0.2461 |
| | 5 | 0.0000 | 0.0008 | 0.0050 | 0.0165 | 0.0389 | 0.0735 | 0.1181 | 0.1672 | 0.2128 | 0.2461 |
| | 6 | 0.0000 | 0.0001 | 0.0006 | 0.0028 | 0.0087 | 0.0210 | 0.0424 | 0.0743 | 0.1160 | 0.1641 |
| | 7 | 0.0000 | 0.0000 | 0.0000 | 0.0003 | 0.0012 | 0.0039 | 0.0098 | 0.0212 | 0.0407 | 0.0703 |
| | 8 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0001 | 0.0004 | 0.0013 | 0.0035 | 0.0083 | 0.0176 |
| 9 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0001 | 0.0003 | 0.0008 | 0.0020 | |
| 10 | 0 | 0.5987 | 0.3487 | 0.1969 | 0.1074 | 0.0563 | 0.0282 | 0.0135 | 0.0060 | 0.0025 | 0.0010 |
| | 1 | 0.3151 | 0.3874 | 0.3474 | 0.2684 | 0.1877 | 0.1211 | 0.0725 | 0.0403 | 0.0207 | 0.0098 |
| | 2 | 0.0746 | 0.1937 | 0.2759 | 0.3020 | 0.2816 | 0.2335 | 0.1757 | 0.1209 | 0.0763 | 0.0439 |
| | 3 | 0.0105 | 0.0574 | 0.1298 | 0.2013 | 0.2503 | 0.2668 | 0.2522 | 0.2150 | 0.1665 | 0.1172 |
| | 4 | 0.0010 | 0.0112 | 0.0401 | 0.0881 | 0.1460 | 0.2001 | 0.2377 | 0.2508 | 0.2384 | 0.2051 |
| | 5 | 0.0001 | 0.0015 | 0.0085 | 0.0264 | 0.0584 | 0.1029 | 0.1536 | 0.2007 | 0.2340 | 0.2461 |
| | 6 | 0.0000 | 0.0001 | 0.0012 | 0.0055 | 0.0162 | 0.0368 | 0.0689 | 0.1115 | 0.1596 | 0.2051 |
| | 7 | 0.0000 | 0.0000 | 0.0001 | 0.0008 | 0.0031 | 0.0090 | 0.0212 | 0.0425 | 0.0746 | 0.1172 |
| | 8 | 0.0000 | 0.0000 | 0.0000 | 0.0001 | 0.0004 | 0.0014 | 0.0043 | 0.0106 | 0.0229 | 0.0439 |
| | 9 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0001 | 0.0005 | 0.0016 | 0.0042 | 0.0098 |
| 10 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0001 | 0.0003 | 0.0010 | |
| 11 | 0 | 0.5688 | 0.3138 | 0.1673 | 0.0859 | 0.0422 | 0.0198 | 0.0088 | 0.0036 | 0.0014 | 0.0005 |
| | 1 | 0.3293 | 0.3835 | 0.3248 | 0.2362 | 0.1549 | 0.0932 | 0.0518 | 0.0266 | 0.0125 | 0.0054 |
| | 2 | 0.0867 | 0.2131 | 0.2866 | 0.2953 | 0.2581 | 0.1998 | 0.1395 | 0.0887 | 0.0513 | 0.0269 |
| | 3 | 0.0137 | 0.0710 | 0.1517 | 0.2215 | 0.2581 | 0.2568 | 0.2254 | 0.1774 | 0.1259 | 0.0806 |
| | 4 | 0.0014 | 0.0158 | 0.0536 | 0.1107 | 0.1721 | 0.2201 | 0.2428 | 0.2365 | 0.2060 | 0.1611 |
| | 5 | 0.0001 | 0.0025 | 0.0132 | 0.0388 | 0.0803 | 0.1321 | 0.1830 | 0.2207 | 0.2360 | 0.2256 |
| | 6 | 0.0000 | 0.0003 | 0.0023 | 0.0097 | 0.0268 | 0.0566 | 0.0985 | 0.1471 | 0.1931 | 0.2256 |
| | 7 | 0.0000 | 0.0000 | 0.0003 | 0.0017 | 0.0064 | 0.0173 | 0.0379 | 0.0701 | 0.1128 | 0.1611 |
| | 8 | 0.0000 | 0.0000 | 0.0000 | 0.0002 | 0.0011 | 0.0037 | 0.0102 | 0.0234 | 0.0462 | 0.0806 |
| | 9 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0001 | 0.0005 | 0.0018 | 0.0052 | 0.0126 | 0.0269 |
| | 10 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0002 | 0.0007 | 0.0021 | 0.0054 |
| 11 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0002 | 0.0005 | |
| 12 | 0 | 0.5404 | 0.2824 | 0.1422 | 0.0687 | 0.0317 | 0.0138 | 0.0057 | 0.0022 | 0.0008 | 0.0002 |
| | 1 | 0.3413 | 0.3766 | 0.3012 | 0.2062 | 0.1267 | 0.0712 | 0.0368 | 0.0174 | 0.0075 | 0.0029 |
| | 2 | 0.0988 | 0.2301 | 0.2924 | 0.2835 | 0.2323 | 0.1678 | 0.1088 | 0.0639 | 0.0339 | 0.0161 |
| | 3 | 0.0173 | 0.0852 | 0.1720 | 0.2362 | 0.2581 | 0.2397 | 0.1954 | 0.1419 | 0.0923 | 0.0537 |
| | 4 | 0.0021 | 0.0213 | 0.0683 | 0.1329 | 0.1936 | 0.2311 | 0.2367 | 0.2128 | 0.1700 | 0.1208 |
| | 5 | 0.0002 | 0.0038 | 0.0193 | 0.0532 | 0.1032 | 0.1585 | 0.2039 | 0.2270 | 0.2225 | 0.1934 |
| | 6 | 0.0000 | 0.0005 | 0.0040 | 0.0155 | 0.0401 | 0.0792 | 0.1281 | 0.1766 | 0.2124 | 0.2256 |
| | 7 | 0.0000 | 0.0000 | 0.0006 | 0.0033 | 0.0115 | 0.0291 | 0.0591 | 0.1009 | 0.1489 | 0.1934 |
| | 8 | 0.0000 | 0.0000 | 0.0001 | 0.0005 | 0.0024 | 0.0078 | 0.0199 | 0.0420 | 0.0762 | 0.1208 |
| | 9 | 0.0000 | 0.0000 | 0.0000 | 0.0001 | 0.0004 | 0.0015 | 0.0048 | 0.0125 | 0.0277 | 0.0537 |
| | 10 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0002 | 0.0008 | 0.0025 | 0.0068 | 0.0161 |
| | 11 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0001 | 0.0003 | 0.0010 | 0.0029 |
| 12 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0001 | 0.0002 | |
| 13 | 0 | 0.5133 | 0.2542 | 0.1209 | 0.0550 | 0.0238 | 0.0097 | 0.0037 | 0.0013 | 0.0004 | 0.0001 |
| | 1 | 0.3512 | 0.3672 | 0.2774 | 0.1787 | 0.1029 | 0.0540 | 0.0259 | 0.0113 | 0.0045 | 0.0016 |
| | 2 | 0.1109 | 0.2448 | 0.2937 | 0.2680 | 0.2059 | 0.1388 | 0.0836 | 0.0453 | 0.0220 | 0.0095 |
| | 3 | 0.0214 | 0.0997 | 0.1900 | 0.2457 | 0.2517 | 0.2181 | 0.1651 | 0.1107 | 0.0660 | 0.0349 |
| | 4 | 0.0028 | 0.0277 | 0.0838 | 0.1535 | 0.2097 | 0.2337 | 0.2222 | 0.1845 | 0.1350 | 0.0873 |
| | 5 | 0.0003 | 0.0055 | 0.0266 | 0.0691 | 0.1258 | 0.1803 | 0.2154 | 0.2214 | 0.1989 | 0.1571 |
| | 6 | 0.0000 | 0.0008 | 0.0063 | 0.0230 | 0.0559 | 0.1030 | 0.1546 | 0.1968 | 0.2169 | 0.2095 |
| | 7 | 0.0000 | 0.0001 | 0.0011 | 0.0058 | 0.0186 | 0.0442 | 0.0833 | 0.1312 | 0.1775 | 0.2095 |
| | 8 | 0.0000 | 0.0000 | 0.0001 | 0.0011 | 0.0047 | 0.0142 | 0.0336 | 0.0656 | 0.1089 | 0.1571 |
| | 9 | 0.0000 | 0.0000 | 0.0000 | 0.0001 | 0.0009 | 0.0034 | 0.0101 | 0.0243 | 0.0495 | 0.0873 |
| | 10 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0001 | 0.0006 | 0.0022 | 0.0065 | 0.0162 | 0.0349 |
| | 11 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0001 | 0.0003 | 0.0012 | 0.0036 | 0.0095 |
| | 12 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0001 | 0.0005 | 0.0016 |
| 13 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0001 | |

Table 1 Binomiale

| N | r | p | | | | | | | | | |
|----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| | | 0.05 | 0.1 | 0.15 | 0.2 | 0.25 | 0.3 | 0.35 | 0.4 | 0.45 | 0.5 |
| 14 | 0 | 0.4877 | 0.2288 | 0.1028 | 0.0440 | 0.0178 | 0.0068 | 0.0024 | 0.0008 | 0.0002 | 0.0001 |
| | 1 | 0.3593 | 0.3559 | 0.2539 | 0.1539 | 0.0832 | 0.0407 | 0.0181 | 0.0073 | 0.0027 | 0.0009 |
| | 2 | 0.1229 | 0.2570 | 0.2912 | 0.2501 | 0.1802 | 0.1134 | 0.0634 | 0.0317 | 0.0141 | 0.0056 |
| | 3 | 0.0259 | 0.1142 | 0.2056 | 0.2501 | 0.2402 | 0.1943 | 0.1366 | 0.0845 | 0.0462 | 0.0222 |
| | 4 | 0.0037 | 0.0349 | 0.0998 | 0.1720 | 0.2202 | 0.2290 | 0.2022 | 0.1549 | 0.1040 | 0.0611 |
| | 5 | 0.0004 | 0.0078 | 0.0352 | 0.0860 | 0.1468 | 0.1963 | 0.2178 | 0.2066 | 0.1701 | 0.1222 |
| | 6 | 0.0000 | 0.0013 | 0.0093 | 0.0322 | 0.0734 | 0.1262 | 0.1759 | 0.2066 | 0.2088 | 0.1833 |
| | 7 | 0.0000 | 0.0002 | 0.0019 | 0.0092 | 0.0280 | 0.0618 | 0.1082 | 0.1574 | 0.1952 | 0.2095 |
| | 8 | 0.0000 | 0.0000 | 0.0003 | 0.0020 | 0.0082 | 0.0232 | 0.0510 | 0.0918 | 0.1398 | 0.1833 |
| | 9 | 0.0000 | 0.0000 | 0.0000 | 0.0003 | 0.0018 | 0.0066 | 0.0183 | 0.0408 | 0.0762 | 0.1222 |
| | 10 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0003 | 0.0014 | 0.0049 | 0.0136 | 0.0312 | 0.0611 |
| | 11 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0002 | 0.0010 | 0.0033 | 0.0093 | 0.0222 |
| | 12 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0001 | 0.0005 | 0.0019 | 0.0056 |
| | 13 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0001 | 0.0002 | 0.0009 |
| 14 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0001 | |
| 15 | 0 | 0.4633 | 0.2059 | 0.0874 | 0.0352 | 0.0134 | 0.0047 | 0.0016 | 0.0005 | 0.0001 | 0.0000 |
| | 1 | 0.3658 | 0.3432 | 0.2312 | 0.1319 | 0.0668 | 0.0305 | 0.0126 | 0.0047 | 0.0016 | 0.0005 |
| | 2 | 0.1348 | 0.2669 | 0.2856 | 0.2309 | 0.1559 | 0.0916 | 0.0476 | 0.0219 | 0.0090 | 0.0032 |
| | 3 | 0.0307 | 0.1285 | 0.2184 | 0.2501 | 0.2252 | 0.1700 | 0.1110 | 0.0634 | 0.0318 | 0.0139 |
| | 4 | 0.0049 | 0.0428 | 0.1156 | 0.1876 | 0.2252 | 0.2186 | 0.1792 | 0.1268 | 0.0780 | 0.0417 |
| | 5 | 0.0006 | 0.0105 | 0.0449 | 0.1032 | 0.1651 | 0.2061 | 0.2123 | 0.1859 | 0.1404 | 0.0916 |
| | 6 | 0.0000 | 0.0019 | 0.0132 | 0.0430 | 0.0917 | 0.1472 | 0.1906 | 0.2066 | 0.1914 | 0.1527 |
| | 7 | 0.0000 | 0.0003 | 0.0030 | 0.0138 | 0.0393 | 0.0811 | 0.1319 | 0.1771 | 0.2013 | 0.1964 |
| | 8 | 0.0000 | 0.0000 | 0.0005 | 0.0035 | 0.0131 | 0.0348 | 0.0710 | 0.1181 | 0.1647 | 0.1964 |
| | 9 | 0.0000 | 0.0000 | 0.0001 | 0.0007 | 0.0034 | 0.0116 | 0.0298 | 0.0612 | 0.1048 | 0.1527 |
| | 10 | 0.0000 | 0.0000 | 0.0000 | 0.0001 | 0.0007 | 0.0030 | 0.0096 | 0.0245 | 0.0515 | 0.0916 |
| | 11 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0001 | 0.0006 | 0.0024 | 0.0074 | 0.0191 | 0.0417 |
| | 12 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0001 | 0.0004 | 0.0016 | 0.0052 | 0.0139 |
| | 13 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0001 | 0.0003 | 0.0010 | 0.0032 |
| | 14 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0001 | 0.0005 |
| 15 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | |
| 16 | 0 | 0.4401 | 0.1853 | 0.0743 | 0.0281 | 0.0100 | 0.0033 | 0.0010 | 0.0003 | 0.0001 | 0.0000 |
| | 1 | 0.3706 | 0.3294 | 0.2097 | 0.1126 | 0.0535 | 0.0228 | 0.0087 | 0.0030 | 0.0009 | 0.0002 |
| | 2 | 0.1463 | 0.2745 | 0.2775 | 0.2111 | 0.1336 | 0.0732 | 0.0353 | 0.0150 | 0.0056 | 0.0018 |
| | 3 | 0.0359 | 0.1423 | 0.2285 | 0.2463 | 0.2079 | 0.1465 | 0.0888 | 0.0468 | 0.0215 | 0.0085 |
| | 4 | 0.0061 | 0.0514 | 0.1311 | 0.2001 | 0.2252 | 0.2040 | 0.1553 | 0.1014 | 0.0572 | 0.0278 |
| | 5 | 0.0008 | 0.0137 | 0.0555 | 0.1201 | 0.1802 | 0.2099 | 0.2008 | 0.1623 | 0.1123 | 0.0667 |
| | 6 | 0.0001 | 0.0028 | 0.0180 | 0.0550 | 0.1101 | 0.1649 | 0.1982 | 0.1983 | 0.1684 | 0.1222 |
| | 7 | 0.0000 | 0.0004 | 0.0045 | 0.0197 | 0.0524 | 0.1010 | 0.1524 | 0.1889 | 0.1969 | 0.1746 |
| | 8 | 0.0000 | 0.0001 | 0.0009 | 0.0055 | 0.0197 | 0.0487 | 0.0923 | 0.1417 | 0.1812 | 0.1964 |
| | 9 | 0.0000 | 0.0000 | 0.0001 | 0.0012 | 0.0058 | 0.0185 | 0.0442 | 0.0840 | 0.1318 | 0.1746 |
| | 10 | 0.0000 | 0.0000 | 0.0000 | 0.0002 | 0.0014 | 0.0056 | 0.0167 | 0.0392 | 0.0755 | 0.1222 |
| | 11 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0002 | 0.0013 | 0.0049 | 0.0142 | 0.0337 | 0.0667 |
| | 12 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0002 | 0.0011 | 0.0040 | 0.0115 | 0.0278 |
| | 13 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0002 | 0.0008 | 0.0029 | 0.0085 |
| | 14 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0001 | 0.0005 | 0.0018 |
| | 15 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0001 | 0.0002 |
| 16 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | |
| 17 | 0 | 0.4181 | 0.1668 | 0.0631 | 0.0225 | 0.0075 | 0.0023 | 0.0007 | 0.0002 | 0.0000 | 0.0000 |
| | 1 | 0.3741 | 0.3150 | 0.1893 | 0.0957 | 0.0426 | 0.0169 | 0.0060 | 0.0019 | 0.0005 | 0.0001 |
| | 2 | 0.1575 | 0.2800 | 0.2673 | 0.1914 | 0.1136 | 0.0581 | 0.0260 | 0.0102 | 0.0035 | 0.0010 |
| | 3 | 0.0415 | 0.1556 | 0.2359 | 0.2393 | 0.1893 | 0.1245 | 0.0701 | 0.0341 | 0.0144 | 0.0052 |
| | 4 | 0.0076 | 0.0605 | 0.1457 | 0.2093 | 0.2209 | 0.1868 | 0.1320 | 0.0796 | 0.0411 | 0.0182 |
| | 5 | 0.0010 | 0.0175 | 0.0668 | 0.1361 | 0.1914 | 0.2081 | 0.1849 | 0.1379 | 0.0875 | 0.0472 |
| | 6 | 0.0001 | 0.0039 | 0.0236 | 0.0680 | 0.1276 | 0.1784 | 0.1991 | 0.1839 | 0.1432 | 0.0944 |
| | 7 | 0.0000 | 0.0007 | 0.0065 | 0.0267 | 0.0668 | 0.1201 | 0.1685 | 0.1927 | 0.1841 | 0.1484 |
| | 8 | 0.0000 | 0.0001 | 0.0014 | 0.0084 | 0.0279 | 0.0644 | 0.1134 | 0.1606 | 0.1883 | 0.1855 |
| | 9 | 0.0000 | 0.0000 | 0.0003 | 0.0021 | 0.0093 | 0.0276 | 0.0611 | 0.1070 | 0.1540 | 0.1855 |
| | 10 | 0.0000 | 0.0000 | 0.0000 | 0.0004 | 0.0025 | 0.0095 | 0.0263 | 0.0571 | 0.1008 | 0.1484 |
| | 11 | 0.0000 | 0.0000 | 0.0000 | 0.0001 | 0.0005 | 0.0026 | 0.0090 | 0.0242 | 0.0525 | 0.0944 |
| | 12 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0001 | 0.0006 | 0.0024 | 0.0081 | 0.0215 | 0.0472 |
| | 13 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0001 | 0.0005 | 0.0021 | 0.0068 | 0.0182 |
| 14 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0001 | 0.0004 | 0.0016 | 0.0052 | |

Table 1 Binomiale

| N | r | p | | | | | | | | | |
|----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| | | 0.05 | 0.1 | 0.15 | 0.2 | 0.25 | 0.3 | 0.35 | 0.4 | 0.45 | 0.5 |
| 17 | 15 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0001 | 0.0003 | 0.0010 |
| | 16 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0001 |
| | 17 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| 18 | 0 | 0.3972 | 0.1501 | 0.0536 | 0.0180 | 0.0056 | 0.0016 | 0.0004 | 0.0001 | 0.0000 | 0.0000 |
| | 1 | 0.3763 | 0.3002 | 0.1704 | 0.0811 | 0.0338 | 0.0126 | 0.0042 | 0.0012 | 0.0003 | 0.0001 |
| | 2 | 0.1683 | 0.2835 | 0.2556 | 0.1723 | 0.0958 | 0.0458 | 0.0190 | 0.0069 | 0.0022 | 0.0006 |
| | 3 | 0.0473 | 0.1680 | 0.2406 | 0.2297 | 0.1704 | 0.1046 | 0.0547 | 0.0246 | 0.0095 | 0.0031 |
| | 4 | 0.0093 | 0.0700 | 0.1592 | 0.2153 | 0.2130 | 0.1681 | 0.1104 | 0.0614 | 0.0291 | 0.0117 |
| | 5 | 0.0014 | 0.0218 | 0.0787 | 0.1507 | 0.1988 | 0.2017 | 0.1664 | 0.1146 | 0.0666 | 0.0327 |
| | 6 | 0.0002 | 0.0052 | 0.0301 | 0.0816 | 0.1436 | 0.1873 | 0.1941 | 0.1655 | 0.1181 | 0.0708 |
| | 7 | 0.0000 | 0.0010 | 0.0091 | 0.0350 | 0.0820 | 0.1376 | 0.1792 | 0.1892 | 0.1657 | 0.1214 |
| | 8 | 0.0000 | 0.0002 | 0.0022 | 0.0120 | 0.0376 | 0.0811 | 0.1327 | 0.1734 | 0.1864 | 0.1669 |
| | 9 | 0.0000 | 0.0000 | 0.0004 | 0.0033 | 0.0139 | 0.0386 | 0.0794 | 0.1284 | 0.1694 | 0.1855 |
| | 10 | 0.0000 | 0.0000 | 0.0001 | 0.0008 | 0.0042 | 0.0149 | 0.0385 | 0.0771 | 0.1248 | 0.1669 |
| | 11 | 0.0000 | 0.0000 | 0.0000 | 0.0001 | 0.0010 | 0.0046 | 0.0151 | 0.0374 | 0.0742 | 0.1214 |
| | 12 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0002 | 0.0012 | 0.0047 | 0.0145 | 0.0354 | 0.0708 |
| | 13 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0002 | 0.0012 | 0.0045 | 0.0134 | 0.0327 |
| | 14 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0002 | 0.0011 | 0.0039 | 0.0117 |
| | 15 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0002 | 0.0009 | 0.0031 |
| | 16 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0001 | 0.0006 |
| | 17 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0001 |
| 18 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | |
| 19 | 0 | 0.3774 | 0.1351 | 0.0456 | 0.0144 | 0.0042 | 0.0011 | 0.0003 | 0.0001 | 0.0000 | 0.0000 |
| | 1 | 0.3774 | 0.2852 | 0.1529 | 0.0685 | 0.0268 | 0.0093 | 0.0029 | 0.0008 | 0.0002 | 0.0000 |
| | 2 | 0.1787 | 0.2852 | 0.2428 | 0.1540 | 0.0803 | 0.0358 | 0.0138 | 0.0046 | 0.0013 | 0.0003 |
| | 3 | 0.0533 | 0.1796 | 0.2428 | 0.2182 | 0.1517 | 0.0869 | 0.0422 | 0.0175 | 0.0062 | 0.0018 |
| | 4 | 0.0112 | 0.0798 | 0.1714 | 0.2182 | 0.2023 | 0.1491 | 0.0909 | 0.0467 | 0.0203 | 0.0074 |
| | 5 | 0.0018 | 0.0266 | 0.0907 | 0.1636 | 0.2023 | 0.1916 | 0.1468 | 0.0933 | 0.0497 | 0.0222 |
| | 6 | 0.0002 | 0.0069 | 0.0374 | 0.0955 | 0.1574 | 0.1916 | 0.1844 | 0.1451 | 0.0949 | 0.0518 |
| | 7 | 0.0000 | 0.0014 | 0.0122 | 0.0443 | 0.0974 | 0.1525 | 0.1844 | 0.1797 | 0.1443 | 0.0961 |
| | 8 | 0.0000 | 0.0002 | 0.0032 | 0.0166 | 0.0487 | 0.0981 | 0.1489 | 0.1797 | 0.1771 | 0.1442 |
| | 9 | 0.0000 | 0.0000 | 0.0007 | 0.0051 | 0.0198 | 0.0514 | 0.0980 | 0.1464 | 0.1771 | 0.1762 |
| | 10 | 0.0000 | 0.0000 | 0.0001 | 0.0013 | 0.0066 | 0.0220 | 0.0528 | 0.0976 | 0.1449 | 0.1762 |
| | 11 | 0.0000 | 0.0000 | 0.0000 | 0.0003 | 0.0018 | 0.0077 | 0.0233 | 0.0532 | 0.0970 | 0.1442 |
| | 12 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0004 | 0.0022 | 0.0083 | 0.0237 | 0.0529 | 0.0961 |
| | 13 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0001 | 0.0005 | 0.0024 | 0.0085 | 0.0233 | 0.0518 |
| | 14 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0001 | 0.0006 | 0.0024 | 0.0082 | 0.0222 |
| | 15 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0001 | 0.0005 | 0.0022 | 0.0074 |
| | 16 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0001 | 0.0005 | 0.0018 |
| | 17 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0001 | 0.0003 |
| | 18 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| 19 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | |
| 20 | 0 | 0.3585 | 0.1216 | 0.0388 | 0.0115 | 0.0032 | 0.0008 | 0.0002 | 0.0000 | 0.0000 | 0.0000 |
| | 1 | 0.3774 | 0.2702 | 0.1368 | 0.0576 | 0.0211 | 0.0068 | 0.0020 | 0.0005 | 0.0001 | 0.0000 |
| | 2 | 0.1887 | 0.2852 | 0.2293 | 0.1369 | 0.0669 | 0.0278 | 0.0100 | 0.0031 | 0.0008 | 0.0002 |
| | 3 | 0.0596 | 0.1901 | 0.2428 | 0.2054 | 0.1339 | 0.0716 | 0.0323 | 0.0123 | 0.0040 | 0.0011 |
| | 4 | 0.0133 | 0.0898 | 0.1821 | 0.2182 | 0.1897 | 0.1304 | 0.0738 | 0.0350 | 0.0139 | 0.0046 |
| | 5 | 0.0022 | 0.0319 | 0.1028 | 0.1746 | 0.2023 | 0.1789 | 0.1272 | 0.0746 | 0.0365 | 0.0148 |
| | 6 | 0.0003 | 0.0089 | 0.0454 | 0.1091 | 0.1686 | 0.1916 | 0.1712 | 0.1244 | 0.0746 | 0.0370 |
| | 7 | 0.0000 | 0.0020 | 0.0160 | 0.0545 | 0.1124 | 0.1643 | 0.1844 | 0.1659 | 0.1221 | 0.0739 |
| | 8 | 0.0000 | 0.0004 | 0.0046 | 0.0222 | 0.0609 | 0.1144 | 0.1614 | 0.1797 | 0.1623 | 0.1201 |
| | 9 | 0.0000 | 0.0001 | 0.0011 | 0.0074 | 0.0271 | 0.0654 | 0.1158 | 0.1597 | 0.1771 | 0.1602 |
| | 10 | 0.0000 | 0.0000 | 0.0002 | 0.0020 | 0.0099 | 0.0308 | 0.0686 | 0.1171 | 0.1593 | 0.1762 |
| | 11 | 0.0000 | 0.0000 | 0.0000 | 0.0005 | 0.0030 | 0.0120 | 0.0336 | 0.0710 | 0.1185 | 0.1602 |
| | 12 | 0.0000 | 0.0000 | 0.0000 | 0.0001 | 0.0008 | 0.0039 | 0.0136 | 0.0355 | 0.0727 | 0.1201 |
| | 13 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0002 | 0.0010 | 0.0045 | 0.0146 | 0.0366 | 0.0739 |
| | 14 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0002 | 0.0012 | 0.0049 | 0.0150 | 0.0370 |
| | 15 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0003 | 0.0013 | 0.0049 | 0.0148 |
| | 16 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0003 | 0.0013 | 0.0046 |
| | 17 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0002 | 0.0011 |
| | 18 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0002 |
| | 19 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| 20 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | |

Table 1 Binomiale

Table 2: Loi Normale standardisée

$$X \sim N(0,1)$$

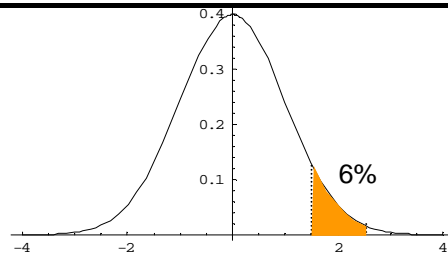
$$F_X(z) = \frac{1}{\sqrt{2\pi}\sigma} e^{-\frac{1}{2}\left(\frac{z-\mu}{\sigma}\right)^2}$$

Cette table donne la probabilité d'obtenir un score de z ou inférieur

étant donné une distribution normale standardisée de scores.

Par exemple, la probabilité d'obtenir ≈ 2 est de $F(2.5) - F(1.5) = 0.9937903 - 0.9331928 = 0.0605975 \approx 6\%$.

Pour z inférieur à 0.00, utiliser le fait que la distribution est symétrique: $F_X(z) = 1 - F_X(-z)$



| z | F _X (z) | z | F _X (z) | z | F _X (z) | z | F _X (z) | z | F _X (z) |
|------|--------------------|------|--------------------|------|--------------------|------|--------------------|------|--------------------|
| 0.00 | 0.5000000 | 1.00 | 0.8413447 | 2.00 | 0.9772499 | 3.00 | 0.9986500 | 4.00 | 0.9999683 |
| 0.02 | 0.5079784 | 1.02 | 0.8461358 | 2.02 | 0.9783084 | 3.02 | 0.9987361 | 4.02 | 0.9999709 |
| 0.04 | 0.5159535 | 1.04 | 0.8508300 | 2.04 | 0.9793249 | 3.04 | 0.9988170 | 4.04 | 0.9999733 |
| 0.06 | 0.5239223 | 1.06 | 0.8554277 | 2.06 | 0.9803008 | 3.06 | 0.9988932 | 4.06 | 0.9999755 |
| 0.08 | 0.5318814 | 1.08 | 0.8599289 | 2.08 | 0.9812373 | 3.08 | 0.9989649 | 4.08 | 0.9999775 |
| 0.10 | 0.5398279 | 1.10 | 0.8643339 | 2.10 | 0.9821356 | 3.10 | 0.9990323 | 4.10 | 0.9999793 |
| 0.12 | 0.5477585 | 1.12 | 0.8686431 | 2.12 | 0.9829970 | 3.12 | 0.9990957 | 4.12 | 0.9999810 |
| 0.14 | 0.5556700 | 1.14 | 0.8728568 | 2.14 | 0.9838227 | 3.14 | 0.9991552 | 4.14 | 0.9999826 |
| 0.16 | 0.5635595 | 1.16 | 0.8769755 | 2.16 | 0.9846137 | 3.16 | 0.9992111 | 4.16 | 0.9999841 |
| 0.18 | 0.5714237 | 1.18 | 0.8809998 | 2.18 | 0.9853713 | 3.18 | 0.9992636 | 4.18 | 0.9999854 |
| 0.20 | 0.5792597 | 1.20 | 0.8849303 | 2.20 | 0.9860966 | 3.20 | 0.9993128 | 4.20 | 0.9999866 |
| 0.22 | 0.5870644 | 1.22 | 0.8887675 | 2.22 | 0.9867907 | 3.22 | 0.9993590 | 4.22 | 0.9999878 |
| 0.24 | 0.5948348 | 1.24 | 0.8925122 | 2.24 | 0.9874546 | 3.24 | 0.9994023 | 4.24 | 0.9999888 |
| 0.26 | 0.6025681 | 1.26 | 0.8961653 | 2.26 | 0.9880894 | 3.26 | 0.9994429 | 4.26 | 0.9999898 |
| 0.28 | 0.6102612 | 1.28 | 0.8997274 | 2.28 | 0.9886962 | 3.28 | 0.9994809 | 4.28 | 0.9999906 |
| 0.30 | 0.6179114 | 1.30 | 0.9031995 | 2.30 | 0.9892759 | 3.30 | 0.9995165 | 4.30 | 0.9999915 |
| 0.32 | 0.6255158 | 1.32 | 0.9065824 | 2.32 | 0.9898296 | 3.32 | 0.9995499 | 4.32 | 0.9999922 |
| 0.34 | 0.6330717 | 1.34 | 0.9098773 | 2.34 | 0.9903582 | 3.34 | 0.9995811 | 4.34 | 0.9999929 |
| 0.36 | 0.6405764 | 1.36 | 0.9130850 | 2.36 | 0.9908625 | 3.36 | 0.9996102 | 4.36 | 0.9999935 |
| 0.38 | 0.6480272 | 1.38 | 0.9162066 | 2.38 | 0.9913437 | 3.38 | 0.9996375 | 4.38 | 0.9999941 |
| 0.40 | 0.6554217 | 1.40 | 0.9192433 | 2.40 | 0.9918025 | 3.40 | 0.9996630 | 4.40 | 0.9999946 |
| 0.42 | 0.6627572 | 1.42 | 0.9221961 | 2.42 | 0.9922397 | 3.42 | 0.9996868 | 4.42 | 0.9999951 |
| 0.44 | 0.6700314 | 1.44 | 0.9250663 | 2.44 | 0.9926564 | 3.44 | 0.9997091 | 4.44 | 0.9999955 |
| 0.46 | 0.6772419 | 1.46 | 0.9278549 | 2.46 | 0.9930531 | 3.46 | 0.9997299 | 4.46 | 0.9999959 |
| 0.48 | 0.6843863 | 1.48 | 0.9305633 | 2.48 | 0.9934309 | 3.48 | 0.9997492 | 4.48 | 0.9999963 |
| 0.50 | 0.6914625 | 1.50 | 0.9331928 | 2.50 | 0.9937903 | 3.50 | 0.9997673 | 4.50 | 0.9999966 |
| 0.52 | 0.6984682 | 1.52 | 0.9357445 | 2.52 | 0.9941322 | 3.52 | 0.9997842 | 4.52 | 0.9999969 |
| 0.54 | 0.7054015 | 1.54 | 0.9382198 | 2.54 | 0.9944574 | 3.54 | 0.9997999 | 4.54 | 0.9999972 |
| 0.56 | 0.7122603 | 1.56 | 0.9406200 | 2.56 | 0.9947664 | 3.56 | 0.9998145 | 4.56 | 0.9999974 |
| 0.58 | 0.7190427 | 1.58 | 0.9429466 | 2.58 | 0.9950600 | 3.58 | 0.9998282 | 4.58 | 0.9999977 |
| 0.60 | 0.7257469 | 1.60 | 0.9452007 | 2.60 | 0.9953388 | 3.60 | 0.9998409 | 4.60 | 0.9999979 |
| 0.62 | 0.7323712 | 1.62 | 0.9473839 | 2.62 | 0.9956035 | 3.62 | 0.9998527 | 4.62 | 0.9999981 |
| 0.64 | 0.7389138 | 1.64 | 0.9494974 | 2.64 | 0.9958547 | 3.64 | 0.9998636 | 4.64 | 0.9999983 |
| 0.66 | 0.7453732 | 1.66 | 0.9515428 | 2.66 | 0.9960929 | 3.66 | 0.9998739 | 4.66 | 0.9999984 |
| 0.68 | 0.7517478 | 1.68 | 0.9535214 | 2.68 | 0.9963188 | 3.68 | 0.9998834 | 4.68 | 0.9999986 |
| 0.70 | 0.7580364 | 1.70 | 0.9554346 | 2.70 | 0.9965330 | 3.70 | 0.9998922 | 4.70 | 0.9999987 |
| 0.72 | 0.7642376 | 1.72 | 0.9572838 | 2.72 | 0.9967359 | 3.72 | 0.9999004 | 4.72 | 0.9999988 |
| 0.74 | 0.7703501 | 1.74 | 0.9590705 | 2.74 | 0.9969280 | 3.74 | 0.9999080 | 4.74 | 0.9999989 |
| 0.76 | 0.7763728 | 1.76 | 0.9607961 | 2.76 | 0.9971099 | 3.76 | 0.9999150 | 4.76 | 0.9999990 |
| 0.78 | 0.7823046 | 1.78 | 0.9624621 | 2.78 | 0.9972820 | 3.78 | 0.9999216 | 4.78 | 0.9999991 |
| 0.80 | 0.7881447 | 1.80 | 0.9640697 | 2.80 | 0.9974448 | 3.80 | 0.9999276 | 4.80 | 0.9999992 |
| 0.82 | 0.7938920 | 1.82 | 0.9656206 | 2.82 | 0.9975988 | 3.82 | 0.9999333 | 4.82 | 0.9999993 |
| 0.84 | 0.7995459 | 1.84 | 0.9671159 | 2.84 | 0.9977443 | 3.84 | 0.9999385 | 4.84 | 0.9999993 |
| 0.86 | 0.8051055 | 1.86 | 0.9685573 | 2.86 | 0.9978817 | 3.86 | 0.9999433 | 4.86 | 0.9999994 |
| 0.88 | 0.8105704 | 1.88 | 0.9699460 | 2.88 | 0.9980116 | 3.88 | 0.9999478 | 4.88 | 0.9999995 |
| 0.90 | 0.8159399 | 1.90 | 0.9712835 | 2.90 | 0.9981341 | 3.90 | 0.9999519 | 4.90 | 0.9999995 |
| 0.92 | 0.8212136 | 1.92 | 0.9725711 | 2.92 | 0.9982498 | 3.92 | 0.9999557 | 4.92 | 0.9999996 |
| 0.94 | 0.8263912 | 1.94 | 0.9738102 | 2.94 | 0.9983589 | 3.94 | 0.9999592 | 4.94 | 0.9999996 |
| 0.96 | 0.8314724 | 1.96 | 0.9750022 | 2.96 | 0.9984617 | 3.96 | 0.9999625 | 4.96 | 0.9999996 |
| 0.98 | 0.8364569 | 1.98 | 0.9761483 | 2.98 | 0.9985587 | 3.98 | 0.9999655 | 4.98 | 0.9999997 |

Table 2 Normale

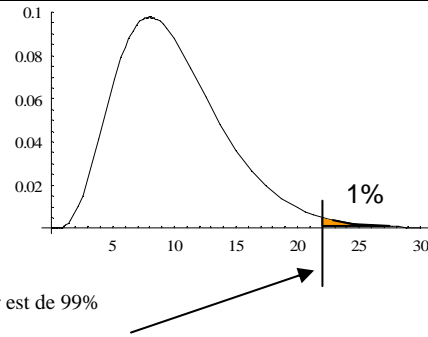
Table 3: loi χ^2

$$X \sim \chi^2(v)$$

$$f_X(z) = \frac{1}{2^{\frac{v}{2}} \Gamma\left(\frac{v}{2}\right)} z^{\frac{v}{2}-1} e^{-\frac{z}{2}}$$

Cette table donne la valeur z pour obtenir une probabilité P étant donné une distribution χ^2 avec v degré de liberté.

Par exemple, la valeur X pour laquelle la probabilité d'obtenir un z égal ou inférieur est de 99% quand X est chi carré avec 10 degrés de liberté est de 23.209.



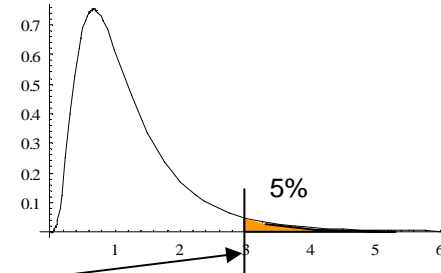
| v | P | | | | | | | | | |
|-----|--------|--------|--------|--------|--------|---------|---------|---------|---------|---------|
| | 0.005 | 0.01 | 0.025 | 0.05 | 0.10 | 0.90 | 0.950 | 0.975 | 0.990 | 0.995 |
| 1 | 0.000 | 0.000 | 0.001 | 0.004 | 0.016 | 2.706 | 3.841 | 5.024 | 6.635 | 7.879 |
| 2 | 0.010 | 0.020 | 0.051 | 0.103 | 0.211 | 4.605 | 5.991 | 7.378 | 9.210 | 10.597 |
| 3 | 0.072 | 0.115 | 0.216 | 0.352 | 0.584 | 6.251 | 7.815 | 9.348 | 11.345 | 12.838 |
| 4 | 0.207 | 0.297 | 0.484 | 0.711 | 1.064 | 7.779 | 9.488 | 11.143 | 13.277 | 14.860 |
| 5 | 0.412 | 0.554 | 0.831 | 1.145 | 1.610 | 9.236 | 11.070 | 12.832 | 15.086 | 16.750 |
| 6 | 0.676 | 0.872 | 1.237 | 1.635 | 2.204 | 10.645 | 12.592 | 14.449 | 16.812 | 18.548 |
| 7 | 0.989 | 1.239 | 1.690 | 2.167 | 2.833 | 12.017 | 14.067 | 16.013 | 18.475 | 20.278 |
| 8 | 1.344 | 1.647 | 2.180 | 2.733 | 3.490 | 13.362 | 15.507 | 17.535 | 20.090 | 21.955 |
| 9 | 1.735 | 2.088 | 2.700 | 3.325 | 4.168 | 14.684 | 16.919 | 19.023 | 21.666 | 23.589 |
| 10 | 2.156 | 2.558 | 3.247 | 3.940 | 4.865 | 15.987 | 18.307 | 20.483 | 23.209 | 25.188 |
| 11 | 2.603 | 3.053 | 3.816 | 4.575 | 5.578 | 17.275 | 19.675 | 21.920 | 24.725 | 26.757 |
| 12 | 3.074 | 3.571 | 4.404 | 5.226 | 6.304 | 18.549 | 21.026 | 23.337 | 26.217 | 28.300 |
| 13 | 3.565 | 4.107 | 5.009 | 5.892 | 7.041 | 19.812 | 22.362 | 24.736 | 27.688 | 29.819 |
| 14 | 4.075 | 4.660 | 5.629 | 6.571 | 7.790 | 21.064 | 23.685 | 26.119 | 29.141 | 31.319 |
| 15 | 4.601 | 5.229 | 6.262 | 7.261 | 8.547 | 22.307 | 24.996 | 27.488 | 30.578 | 32.801 |
| 16 | 5.142 | 5.812 | 6.908 | 7.962 | 9.312 | 23.542 | 26.296 | 28.845 | 32.000 | 34.267 |
| 17 | 5.697 | 6.408 | 7.564 | 8.672 | 10.085 | 24.769 | 27.587 | 30.191 | 33.409 | 35.718 |
| 18 | 6.265 | 7.015 | 8.231 | 9.390 | 10.865 | 25.989 | 28.869 | 31.526 | 34.805 | 37.156 |
| 19 | 6.844 | 7.633 | 8.907 | 10.117 | 11.651 | 27.204 | 30.144 | 32.852 | 36.191 | 38.582 |
| 20 | 7.434 | 8.260 | 9.591 | 10.851 | 12.443 | 28.412 | 31.410 | 34.170 | 37.566 | 39.997 |
| 21 | 8.034 | 8.897 | 10.283 | 11.591 | 13.240 | 29.615 | 32.671 | 35.479 | 38.932 | 41.401 |
| 22 | 8.643 | 9.542 | 10.982 | 12.338 | 14.041 | 30.813 | 33.924 | 36.781 | 40.289 | 42.796 |
| 23 | 9.260 | 10.196 | 11.689 | 13.091 | 14.848 | 32.007 | 35.172 | 38.076 | 41.638 | 44.181 |
| 24 | 9.886 | 10.856 | 12.401 | 13.848 | 15.659 | 33.196 | 36.415 | 39.364 | 42.980 | 45.558 |
| 25 | 10.520 | 11.524 | 13.120 | 14.611 | 16.473 | 34.382 | 37.652 | 40.646 | 44.314 | 46.928 |
| 26 | 11.160 | 12.198 | 13.844 | 15.379 | 17.292 | 35.563 | 38.885 | 41.923 | 45.642 | 48.290 |
| 27 | 11.808 | 12.878 | 14.573 | 16.151 | 18.114 | 36.741 | 40.113 | 43.195 | 46.963 | 49.645 |
| 28 | 12.461 | 13.565 | 15.308 | 16.928 | 18.939 | 37.916 | 41.337 | 44.461 | 48.278 | 50.994 |
| 29 | 13.121 | 14.256 | 16.047 | 17.708 | 19.768 | 39.087 | 42.557 | 45.722 | 49.588 | 52.335 |
| 30 | 13.787 | 14.953 | 16.791 | 18.493 | 20.599 | 40.256 | 43.773 | 46.979 | 50.892 | 53.672 |
| 32 | 15.134 | 16.362 | 18.291 | 20.072 | 22.271 | 42.585 | 46.194 | 49.480 | 53.486 | 56.328 |
| 34 | 16.501 | 17.789 | 19.806 | 21.664 | 23.952 | 44.903 | 48.602 | 51.966 | 56.061 | 58.964 |
| 36 | 17.887 | 19.233 | 21.336 | 23.269 | 25.643 | 47.212 | 50.998 | 54.437 | 58.619 | 61.581 |
| 38 | 19.289 | 20.691 | 22.878 | 24.884 | 27.343 | 49.513 | 53.384 | 56.895 | 61.162 | 64.181 |
| 40 | 20.707 | 22.164 | 24.433 | 26.509 | 29.051 | 51.805 | 55.758 | 59.342 | 63.691 | 66.766 |
| 45 | 24.311 | 25.901 | 28.366 | 30.612 | 33.350 | 57.505 | 61.656 | 65.410 | 69.957 | 73.166 |
| 50 | 27.991 | 29.707 | 32.357 | 34.764 | 37.689 | 63.167 | 67.505 | 71.420 | 76.154 | 79.490 |
| 55 | 31.735 | 33.571 | 36.398 | 38.958 | 42.060 | 68.796 | 73.311 | 77.380 | 82.292 | 85.749 |
| 60 | 35.534 | 37.485 | 40.482 | 43.188 | 46.459 | 74.397 | 79.082 | 83.298 | 88.379 | 91.952 |
| 65 | 39.383 | 41.444 | 44.603 | 47.450 | 50.883 | 79.973 | 84.821 | 89.177 | 94.422 | 98.105 |
| 70 | 43.275 | 45.442 | 48.758 | 51.739 | 55.329 | 85.527 | 90.531 | 95.023 | 100.425 | 104.215 |
| 75 | 47.206 | 49.475 | 52.942 | 56.054 | 59.795 | 91.061 | 96.217 | 100.839 | 106.393 | 110.285 |
| 80 | 51.172 | 53.540 | 57.153 | 60.391 | 64.278 | 96.578 | 101.879 | 106.629 | 112.329 | 116.321 |
| 85 | 55.170 | 57.634 | 61.389 | 64.749 | 68.777 | 102.079 | 107.522 | 112.393 | 118.236 | 122.324 |
| 90 | 59.196 | 61.754 | 65.647 | 69.126 | 73.291 | 107.565 | 113.145 | 118.136 | 124.116 | 128.299 |
| 95 | 63.250 | 65.898 | 69.925 | 73.520 | 77.818 | 113.038 | 118.752 | 123.858 | 129.973 | 134.247 |
| 100 | 67.328 | 70.065 | 74.222 | 77.929 | 82.358 | 118.498 | 124.342 | 129.561 | 135.807 | 140.170 |

Table 3 Chi2

Table 4: loi Fisher F excédant 5%

$$F \sim F(v_1, v_2)$$

$$f_x(z) = \frac{(\frac{1}{2}N_X + \frac{1}{2}N_Y - 1)!}{(\frac{1}{2}N_X - 1)!(\frac{1}{2}N_Y - 1)!} \times \frac{z^{\frac{1}{2}N_X - 1} \left(\frac{N_Y}{N_X}\right)^{\frac{1}{2}N_X + \frac{1}{2}N_Y}}{\left(z + \frac{N_Y}{N_X}\right)^{\frac{1}{2}N_X + \frac{1}{2}N_Y}}$$



Cette table donne la valeur z pour obtenir une probabilité P étant donné une distribution F avec v_1, v_2 degrés de liberté.

Par exemple, la valeur x pour laquelle la probabilité d'obtenir un z égal ou supérieur est de 5% quand x est distribué comme une Fisher avec 10, 10 degrés de liberté est de 2.978.

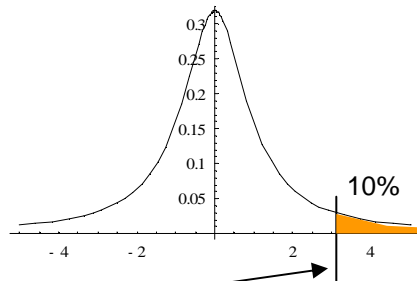
| 5% | | v_1 | | | | | | | | | | | | | | | | | | |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|--|--|
| v_2 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 12 | 15 | 20 | 25 | 30 | 40 | 60 | 120 | | |
| 1 | 161.446 | 199.499 | 215.707 | 224.583 | 230.160 | 233.988 | 236.767 | 238.884 | 240.543 | 241.882 | 243.905 | 245.949 | 248.016 | 249.260 | 250.096 | 251.144 | 252.196 | 253.254 | | |
| 2 | 18.513 | 19.000 | 19.164 | 19.247 | 19.296 | 19.329 | 19.353 | 19.371 | 19.385 | 19.396 | 19.412 | 19.429 | 19.446 | 19.456 | 19.463 | 19.471 | 19.479 | 19.487 | | |
| 3 | 10.128 | 9.552 | 9.277 | 9.117 | 9.013 | 8.941 | 8.887 | 8.845 | 8.812 | 8.785 | 8.745 | 8.703 | 8.660 | 8.634 | 8.617 | 8.594 | 8.572 | 8.549 | | |
| 4 | 7.709 | 6.944 | 6.591 | 6.388 | 6.256 | 6.163 | 6.094 | 6.041 | 5.999 | 5.964 | 5.912 | 5.858 | 5.803 | 5.769 | 5.746 | 5.717 | 5.688 | 5.658 | | |
| 5 | 6.608 | 5.786 | 5.409 | 5.192 | 5.050 | 4.950 | 4.876 | 4.818 | 4.772 | 4.735 | 4.678 | 4.619 | 4.558 | 4.521 | 4.496 | 4.464 | 4.431 | 4.398 | | |
| 6 | 5.987 | 5.143 | 4.757 | 4.534 | 4.387 | 4.284 | 4.207 | 4.147 | 4.099 | 4.060 | 4.000 | 3.938 | 3.874 | 3.835 | 3.808 | 3.774 | 3.740 | 3.705 | | |
| 7 | 5.591 | 4.737 | 4.347 | 4.120 | 3.972 | 3.866 | 3.787 | 3.726 | 3.677 | 3.637 | 3.575 | 3.511 | 3.445 | 3.404 | 3.376 | 3.340 | 3.304 | 3.267 | | |
| 8 | 5.318 | 4.459 | 4.066 | 3.838 | 3.688 | 3.581 | 3.500 | 3.438 | 3.388 | 3.347 | 3.284 | 3.218 | 3.150 | 3.108 | 3.079 | 3.043 | 3.005 | 2.967 | | |
| 9 | 5.117 | 4.256 | 3.863 | 3.633 | 3.482 | 3.374 | 3.293 | 3.230 | 3.179 | 3.137 | 3.073 | 3.006 | 2.936 | 2.893 | 2.864 | 2.826 | 2.787 | 2.748 | | |
| 10 | 4.965 | 4.103 | 3.708 | 3.478 | 3.326 | 3.217 | 3.135 | 3.072 | 3.020 | 2.978 | 2.913 | 2.845 | 2.774 | 2.730 | 2.700 | 2.661 | 2.621 | 2.580 | | |
| 11 | 4.844 | 3.982 | 3.587 | 3.357 | 3.204 | 3.095 | 3.012 | 2.948 | 2.896 | 2.854 | 2.788 | 2.719 | 2.646 | 2.601 | 2.570 | 2.531 | 2.490 | 2.448 | | |
| 12 | 4.747 | 3.885 | 3.490 | 3.259 | 3.106 | 2.996 | 2.913 | 2.849 | 2.796 | 2.753 | 2.687 | 2.617 | 2.544 | 2.498 | 2.466 | 2.426 | 2.384 | 2.341 | | |
| 13 | 4.667 | 3.806 | 3.411 | 3.179 | 3.025 | 2.915 | 2.832 | 2.767 | 2.714 | 2.671 | 2.604 | 2.533 | 2.459 | 2.412 | 2.380 | 2.339 | 2.297 | 2.252 | | |
| 14 | 4.600 | 3.739 | 3.344 | 3.112 | 2.958 | 2.848 | 2.764 | 2.699 | 2.646 | 2.602 | 2.534 | 2.463 | 2.388 | 2.341 | 2.308 | 2.266 | 2.223 | 2.178 | | |
| 15 | 4.543 | 3.682 | 3.287 | 3.056 | 2.901 | 2.790 | 2.707 | 2.641 | 2.588 | 2.544 | 2.475 | 2.403 | 2.328 | 2.280 | 2.247 | 2.204 | 2.160 | 2.114 | | |
| 16 | 4.494 | 3.634 | 3.239 | 3.007 | 2.852 | 2.741 | 2.657 | 2.591 | 2.538 | 2.494 | 2.425 | 2.352 | 2.276 | 2.227 | 2.194 | 2.151 | 2.106 | 2.059 | | |
| 17 | 4.451 | 3.592 | 3.197 | 2.965 | 2.810 | 2.699 | 2.614 | 2.548 | 2.494 | 2.450 | 2.381 | 2.308 | 2.230 | 2.181 | 2.148 | 2.104 | 2.058 | 2.011 | | |
| 18 | 4.414 | 3.555 | 3.160 | 2.928 | 2.773 | 2.661 | 2.577 | 2.510 | 2.456 | 2.412 | 2.342 | 2.269 | 2.191 | 2.141 | 2.107 | 2.063 | 2.017 | 1.968 | | |
| 19 | 4.381 | 3.522 | 3.127 | 2.895 | 2.740 | 2.628 | 2.544 | 2.477 | 2.423 | 2.378 | 2.308 | 2.234 | 2.155 | 2.106 | 2.071 | 2.026 | 1.980 | 1.930 | | |
| 20 | 4.351 | 3.493 | 3.098 | 2.866 | 2.711 | 2.599 | 2.514 | 2.447 | 2.393 | 2.348 | 2.278 | 2.203 | 2.124 | 2.074 | 2.039 | 1.994 | 1.946 | 1.896 | | |
| 21 | 4.325 | 3.467 | 3.072 | 2.840 | 2.685 | 2.573 | 2.488 | 2.420 | 2.366 | 2.321 | 2.250 | 2.176 | 2.096 | 2.045 | 2.010 | 1.965 | 1.916 | 1.866 | | |
| 22 | 4.301 | 3.443 | 3.049 | 2.817 | 2.661 | 2.549 | 2.464 | 2.397 | 2.342 | 2.297 | 2.226 | 2.151 | 2.071 | 2.020 | 1.984 | 1.938 | 1.889 | 1.838 | | |
| 23 | 4.279 | 3.422 | 3.028 | 2.796 | 2.640 | 2.528 | 2.442 | 2.375 | 2.320 | 2.275 | 2.204 | 2.128 | 2.048 | 1.996 | 1.961 | 1.914 | 1.865 | 1.813 | | |
| 24 | 4.260 | 3.403 | 3.009 | 2.776 | 2.621 | 2.508 | 2.423 | 2.355 | 2.300 | 2.255 | 2.183 | 2.108 | 2.027 | 1.975 | 1.939 | 1.892 | 1.842 | 1.790 | | |
| 25 | 4.242 | 3.385 | 2.991 | 2.759 | 2.603 | 2.490 | 2.405 | 2.337 | 2.282 | 2.236 | 2.165 | 2.089 | 2.007 | 1.955 | 1.919 | 1.872 | 1.822 | 1.768 | | |
| 26 | 4.225 | 3.369 | 2.975 | 2.743 | 2.587 | 2.474 | 2.388 | 2.321 | 2.265 | 2.220 | 2.148 | 2.072 | 1.990 | 1.938 | 1.901 | 1.853 | 1.803 | 1.749 | | |
| 27 | 4.210 | 3.354 | 2.960 | 2.728 | 2.572 | 2.459 | 2.373 | 2.305 | 2.250 | 2.204 | 2.132 | 2.056 | 1.974 | 1.921 | 1.884 | 1.836 | 1.785 | 1.731 | | |
| 28 | 4.196 | 3.340 | 2.947 | 2.714 | 2.558 | 2.445 | 2.359 | 2.291 | 2.236 | 2.190 | 2.118 | 2.041 | 1.959 | 1.906 | 1.869 | 1.820 | 1.769 | 1.714 | | |
| 29 | 4.183 | 3.328 | 2.934 | 2.701 | 2.545 | 2.432 | 2.346 | 2.278 | 2.223 | 2.177 | 2.104 | 2.027 | 1.945 | 1.891 | 1.854 | 1.806 | 1.754 | 1.698 | | |
| 30 | 4.171 | 3.316 | 2.922 | 2.690 | 2.534 | 2.421 | 2.334 | 2.266 | 2.211 | 2.165 | 2.092 | 2.015 | 1.932 | 1.878 | 1.841 | 1.792 | 1.740 | 1.683 | | |
| 40 | 4.085 | 3.232 | 2.839 | 2.606 | 2.449 | 2.336 | 2.249 | 2.180 | 2.124 | 2.077 | 2.003 | 1.924 | 1.839 | 1.783 | 1.744 | 1.693 | 1.637 | 1.577 | | |
| 60 | 4.001 | 3.150 | 2.758 | 2.525 | 2.368 | 2.254 | 2.167 | 2.097 | 2.040 | 1.993 | 1.917 | 1.836 | 1.748 | 1.690 | 1.649 | 1.594 | 1.534 | 1.467 | | |
| 120 | 3.920 | 3.072 | 2.680 | 2.447 | 2.290 | 2.175 | 2.087 | 2.016 | 1.959 | 1.910 | 1.834 | 1.750 | 1.659 | 1.598 | 1.554 | 1.495 | 1.429 | 1.352 | | |

Table 4 Fisher

Table 5: loi Student t

$X \sim t(\nu)$

$$f_X(z) = \frac{1}{\sqrt{\nu\pi}} \frac{\Gamma\left(\frac{\nu+1}{2}\right)}{\Gamma\left(\frac{\nu}{2}\right)} \left(1 + \frac{z^2}{\nu}\right)^{-\frac{\nu+1}{2}}$$



Cette table donne la valeur z pour obtenir une probabilité P étant donné une distribution τ avec ν degré de liberté.

Par exemple, la valeur X pour laquelle la probabilité d'obtenir un z égal ou supérieur est de 10% quand X est t avec 1 degré de liberté est de 3.078.

| v | P | | | | | | |
|-----|-------|-------|-------|--------|--------|--------|---------|
| | 0.25 | 0.10 | 0.05 | 0.025 | 0.010 | 0.005 | 0.001 |
| 1 | 1.000 | 3.078 | 6.314 | 12.706 | 31.821 | 63.656 | 318.289 |
| 2 | 0.816 | 1.886 | 2.920 | 4.303 | 6.965 | 9.925 | 22.328 |
| 3 | 0.765 | 1.638 | 2.353 | 3.182 | 4.541 | 5.841 | 10.214 |
| 4 | 0.741 | 1.533 | 2.132 | 2.776 | 3.747 | 4.604 | 7.173 |
| 5 | 0.727 | 1.476 | 2.015 | 2.571 | 3.365 | 4.032 | 5.894 |
| 6 | 0.718 | 1.440 | 1.943 | 2.447 | 3.143 | 3.707 | 5.208 |
| 7 | 0.711 | 1.415 | 1.895 | 2.365 | 2.998 | 3.499 | 4.785 |
| 8 | 0.706 | 1.397 | 1.860 | 2.306 | 2.896 | 3.355 | 4.501 |
| 9 | 0.703 | 1.383 | 1.833 | 2.262 | 2.821 | 3.250 | 4.297 |
| 10 | 0.700 | 1.372 | 1.812 | 2.228 | 2.764 | 3.169 | 4.144 |
| 11 | 0.697 | 1.363 | 1.796 | 2.201 | 2.718 | 3.106 | 4.025 |
| 12 | 0.695 | 1.356 | 1.782 | 2.179 | 2.681 | 3.055 | 3.930 |
| 13 | 0.694 | 1.350 | 1.771 | 2.160 | 2.650 | 3.012 | 3.852 |
| 14 | 0.692 | 1.345 | 1.761 | 2.145 | 2.624 | 2.977 | 3.787 |
| 15 | 0.691 | 1.341 | 1.753 | 2.131 | 2.602 | 2.947 | 3.733 |
| 16 | 0.690 | 1.337 | 1.746 | 2.120 | 2.583 | 2.921 | 3.686 |
| 17 | 0.689 | 1.333 | 1.740 | 2.110 | 2.567 | 2.898 | 3.646 |
| 18 | 0.688 | 1.330 | 1.734 | 2.101 | 2.552 | 2.878 | 3.610 |
| 19 | 0.688 | 1.328 | 1.729 | 2.093 | 2.539 | 2.861 | 3.579 |
| 20 | 0.687 | 1.325 | 1.725 | 2.086 | 2.528 | 2.845 | 3.552 |
| 21 | 0.686 | 1.323 | 1.721 | 2.080 | 2.518 | 2.831 | 3.527 |
| 22 | 0.686 | 1.321 | 1.717 | 2.074 | 2.508 | 2.819 | 3.505 |
| 23 | 0.685 | 1.319 | 1.714 | 2.069 | 2.500 | 2.807 | 3.485 |
| 24 | 0.685 | 1.318 | 1.711 | 2.064 | 2.492 | 2.797 | 3.467 |
| 25 | 0.684 | 1.316 | 1.708 | 2.060 | 2.485 | 2.787 | 3.450 |
| 26 | 0.684 | 1.315 | 1.706 | 2.056 | 2.479 | 2.779 | 3.435 |
| 27 | 0.684 | 1.314 | 1.703 | 2.052 | 2.473 | 2.771 | 3.421 |
| 28 | 0.683 | 1.313 | 1.701 | 2.048 | 2.467 | 2.763 | 3.408 |
| 29 | 0.683 | 1.311 | 1.699 | 2.045 | 2.462 | 2.756 | 3.396 |
| 30 | 0.683 | 1.310 | 1.697 | 2.042 | 2.457 | 2.750 | 3.385 |
| 32 | 0.682 | 1.309 | 1.694 | 2.037 | 2.449 | 2.738 | 3.365 |
| 34 | 0.682 | 1.307 | 1.691 | 2.032 | 2.441 | 2.728 | 3.348 |
| 36 | 0.681 | 1.306 | 1.688 | 2.028 | 2.434 | 2.719 | 3.333 |
| 38 | 0.681 | 1.304 | 1.686 | 2.024 | 2.429 | 2.712 | 3.319 |
| 40 | 0.681 | 1.303 | 1.684 | 2.021 | 2.423 | 2.704 | 3.307 |
| 45 | 0.680 | 1.301 | 1.679 | 2.014 | 2.412 | 2.690 | 3.281 |
| 50 | 0.679 | 1.299 | 1.676 | 2.009 | 2.403 | 2.678 | 3.261 |
| 55 | 0.679 | 1.297 | 1.673 | 2.004 | 2.396 | 2.668 | 3.245 |
| 60 | 0.679 | 1.296 | 1.671 | 2.000 | 2.390 | 2.660 | 3.232 |
| 65 | 0.678 | 1.295 | 1.669 | 1.997 | 2.385 | 2.654 | 3.220 |
| 70 | 0.678 | 1.294 | 1.667 | 1.994 | 2.381 | 2.648 | 3.211 |
| 75 | 0.678 | 1.293 | 1.665 | 1.992 | 2.377 | 2.643 | 3.202 |
| 80 | 0.678 | 1.292 | 1.664 | 1.990 | 2.374 | 2.639 | 3.195 |
| 85 | 0.677 | 1.292 | 1.663 | 1.988 | 2.371 | 2.635 | 3.189 |
| 90 | 0.677 | 1.291 | 1.662 | 1.987 | 2.368 | 2.632 | 3.183 |
| 95 | 0.677 | 1.291 | 1.661 | 1.985 | 2.366 | 2.629 | 3.178 |
| 100 | 0.677 | 1.290 | 1.660 | 1.984 | 2.364 | 2.626 | 3.174 |

Table 5 Student t

Table 6: Studentized range t' pour 5%

Équation non disponible...

Cette table donne la valeur z pour obtenir une probabilité de 5% étant donné une distribution τ' avec (dl_e , V) degrés de liberté.
 Par exemple, la valeur **X** pour laquelle la probabilité d'obtenir un z égal ou supérieur est de 5% quand **X** est t' avec (1,7) degrés de liberté est de 43.12.

| 5% | V | | | | | | | | | | | | | | |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|
| dl_e | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | |
| 1 | 17.79 | 26.98 | 32.82 | 37.82 | 40.41 | 43.12 | 45.40 | 47.36 | 49.07 | 50.59 | 51.96 | 53.20 | 54.33 | 55.36 | |
| 2 | 6.08 | 8.33 | 9.80 | 10.88 | 11.74 | 12.44 | 13.03 | 13.54 | 13.99 | 14.39 | 14.75 | 15.08 | 15.38 | 15.65 | |
| 3 | 4.50 | 5.91 | 6.82 | 7.50 | 8.04 | 8.48 | 8.85 | 9.18 | 9.46 | 9.72 | 9.95 | 10.15 | 10.35 | 10.53 | |
| 4 | 3.93 | 5.04 | 5.76 | 6.29 | 6.71 | 7.05 | 7.35 | 7.60 | 7.83 | 8.03 | 8.21 | 8.37 | 8.52 | 8.66 | |
| 5 | 3.64 | 4.60 | 5.22 | 5.67 | 6.03 | 6.33 | 6.58 | 6.80 | 7.00 | 7.17 | 7.32 | 7.47 | 7.60 | 7.72 | |
| 6 | 3.46 | 5.34 | 4.90 | 5.31 | 5.63 | 5.90 | 6.12 | 6.32 | 6.49 | 6.65 | 6.79 | 6.92 | 7.03 | 7.14 | |
| 7 | 3.34 | 4.16 | 4.68 | 5.06 | 5.36 | 5.61 | 5.82 | 6.00 | 6.16 | 6.30 | 6.43 | 6.55 | 6.66 | 6.76 | |
| 8 | 3.26 | 4.04 | 4.53 | 4.89 | 5.17 | 5.40 | 5.60 | 5.77 | 5.92 | 6.05 | 6.18 | 6.29 | 6.39 | 6.48 | |
| 9 | 3.20 | 3.95 | 4.42 | 4.76 | 5.02 | 5.24 | 5.43 | 5.60 | 5.74 | 5.87 | 5.98 | 6.09 | 6.19 | 6.28 | |
| 10 | 3.15 | 3.88 | 4.33 | 4.65 | 4.91 | 5.12 | 5.30 | 5.46 | 5.60 | 5.72 | 5.83 | 5.94 | 6.03 | 6.11 | |
| 11 | 3.11 | 3.82 | 4.26 | 4.57 | 4.82 | 5.03 | 5.20 | 5.35 | 5.49 | 5.60 | 5.71 | 5.81 | 5.90 | 5.98 | |
| 12 | 3.08 | 3.77 | 4.20 | 4.51 | 4.75 | 4.95 | 5.12 | 5.26 | 5.40 | 5.51 | 5.62 | 5.71 | 5.79 | 5.88 | |
| 13 | 3.06 | 3.74 | 4.15 | 4.45 | 4.69 | 4.88 | 5.05 | 5.19 | 5.32 | 5.43 | 5.53 | 5.63 | 5.71 | 5.79 | |
| 14 | 3.03 | 3.70 | 4.11 | 4.41 | 4.64 | 4.83 | 4.90 | 5.13 | 5.25 | 5.36 | 5.46 | 5.55 | 5.64 | 5.71 | |
| 15 | 3.01 | 3.67 | 4.08 | 4.37 | 4.60 | 4.78 | 4.94 | 5.08 | 5.20 | 5.31 | 5.40 | 5.49 | 5.57 | 5.65 | |
| 16 | 3.00 | 3.65 | 4.05 | 4.33 | 4.56 | 4.74 | 4.90 | 5.03 | 5.15 | 5.26 | 5.35 | 5.44 | 5.52 | 5.59 | |
| 17 | 2.98 | 3.63 | 4.02 | 4.30 | 4.52 | 4.70 | 4.86 | 4.99 | 5.11 | 5.21 | 5.31 | 5.39 | 5.47 | 5.54 | |
| 18 | 2.97 | 3.61 | 4.00 | 4.28 | 4.50 | 4.67 | 4.82 | 4.96 | 5.07 | 5.17 | 5.27 | 5.35 | 5.43 | 5.50 | |
| 19 | 2.96 | 3.59 | 3.98 | 4.25 | 4.47 | 4.64 | 4.79 | 4.92 | 5.04 | 5.14 | 5.23 | 5.32 | 5.39 | 5.46 | |
| 20 | 2.95 | 3.58 | 3.96 | 4.23 | 4.44 | 4.62 | 4.77 | 4.90 | 5.01 | 5.11 | 5.20 | 5.28 | 5.36 | 5.43 | |
| 24 | 2.92 | 3.53 | 3.90 | 4.17 | 4.37 | 4.54 | 4.68 | 4.81 | 4.92 | 5.01 | 5.10 | 5.18 | 5.25 | 5.32 | |
| 30 | 2.89 | 3.49 | 3.84 | 4.10 | 4.30 | 4.46 | 4.60 | 4.72 | 4.82 | 4.92 | 5.00 | 5.08 | 5.15 | 5.21 | |
| 40 | 2.86 | 3.44 | 3.79 | 4.04 | 4.23 | 4.39 | 4.52 | 4.64 | 4.74 | 4.82 | 4.90 | 4.98 | 5.04 | 5.11 | |
| 60 | 2.83 | 3.40 | 3.74 | 3.98 | 4.16 | 4.31 | 4.44 | 4.55 | 4.65 | 4.73 | 4.81 | 4.88 | 4.94 | 5.00 | |
| 120 | 2.80 | 3.36 | 3.69 | 3.92 | 4.10 | 4.24 | 4.36 | 4.47 | 4.56 | 4.64 | 4.71 | 4.78 | 4.84 | 4.90 | |
| infini | 2.77 | 3.31 | 3.63 | 3.86 | 4.03 | 4.17 | 4.29 | 4.39 | 4.47 | 4.55 | 4.62 | 4.68 | 4.74 | 4.80 | |

Table 6 Studentized range

Table 7a: Pour trouver la taille de l'effet

| type de test | index | La taille de l'effet sera | | |
|---|--|---------------------------|------------------|----------|
| | | petit si | moyen si | grand si |
| <i>test t</i> | $d = \frac{ \mu_0 - \mu_1 }{\sqrt{\frac{\bar{X}}{n-1}}}$ | < .20 | entre .20 et .80 | > .80 |
| <i>corrélation</i> | $ r_1 $ | < .10 | entre .10 et .50 | > .50 |
| <i>Binomial avec p = 0.5 (test de la médiane, des signes)</i> | $ p_1 - 0.5 $ | < .05 | entre .05 et .25 | > .25 |
| χ^2 | $w = \sqrt{\frac{\sum_i (a_{oi} - a_{1i})^2}{a_{0i}}}$ | < .10 | entre .10 et .40 | > .40 |
| ANOVA | $f = \frac{\sigma_A}{\sigma_{S A}}$ | < .10 | entre .10 et .25 | > .25 |

Tiré de Cohen, J. (1992), A power primer, *Psychological Bulletin*, *112*, 155-159.

Note:

μ_0 : la moyenne de l'hypothèse nulle. μ_1 : la moyenne attendue s'il existe un effet.

r_1 : corrélation attendue s'il existe une association.

p_1 : proportion attendue si elle diffère de 0.5.

a_{0i} : les effectifs prévus par l'hypothèse nulle; a_{1i} , les effectifs prévus s'il existe un effet; **exprimés en pourcentage.**

σ_A : l'écart type entre les moyennes de chaque condition, s'il existe un effet;

$\sigma_{S|A}$ l'écart type de l'erreur expérimentale, donnée par la racine carrée de $CM_{S|A}$.

Table 7b: Pour trouver la taille de l'échantillon étant donné la taille attendue de l'effet

| type de test | Pour une puissance de .80 | | | | | | | | |
|---|---------------------------|------|-------|----------------|---------------------|-------|-------|------|-------|
| | 0.01 | | | seuil α | | | 0.1 | | |
| | petit | moy. | grand | petit | 0.05 moy. | grand | petit | moy. | grand |
| test t | 586 | 95 | 38 | 393 | 64 | 26 | 310 | 50 | 20 |
| corrélation | 1163 | 125 | 41 | 783 | 85 | 28 | 617 | 68 | 22 |
| Binomial avec $p = 0.5$ (test de la médiane, des signes) | 1165 | 127 | 44 | 783 | 85 | 30 | 616 | 67 | 23 |
| χ^2 | | | | | | | | | |
| 1 dl | 1168 | 130 | 38 | 785 | 87 | 26 | 618 | 69 | 25 |
| 2 dl | 1388 | 154 | 56 | 964 | 107 | 39 | 771 | 86 | 31 |
| 3 dl | 1546 | 172 | 62 | 1090 | 121 | 44 | 880 | 98 | 35 |
| 4 dl | 1675 | 186 | 67 | 1194 | 133 | 48 | 968 | 108 | 39 |
| 5 dl | 1787 | 199 | 71 | 1293 | 143 | 51 | 1045 | 116 | 42 |
| 6 dl | 1887 | 210 | 75 | 1362 | 151 | 54 | 1113 | 124 | 45 |
| ANOVA | | | | | | | | | |
| 2 groupes | 586 | 95 | 38 | 393 | 64 | 26 | 310 | 50 | 20 |
| 3 groupes | 464 | 76 | 30 | 322 | 52 | 21 | 258 | 41 | 17 |
| 4 groupes | 388 | 63 | 25 | 274 | 45 | 18 | 221 | 36 | 15 |
| 5 groupes | 336 | 55 | 22 | 240 | 39 | 16 | 193 | 32 | 13 |
| 6 groupes | 299 | 49 | 20 | 215 | 35 | 14 | 174 | 28 | 12 |
| 7 groupes | 271 | 44 | 18 | 195 | 32 | 13 | 159 | 26 | 11 |

Tiré de Cohen, J. (1992), A power primer, *Psychological Bulletin*, 112, 155-159.

Note:

Pour les tests t , binomial et l'ANOVA, le nombre est le nombre de sujets **par groupe**.

Pour les tests sur un coefficient de corrélation et de χ^2 , le nombre dans la table est le nombre de **sujets total**.

En règle général, en psychologie, les effets sont moyens avec un $\alpha = .05$, d'où la colonne en grise.