# Appendix 3

# Kolmogorov–Smirnov Tables

Critical values, $d_{alpha}(n)^a$, of the maximum absolute difference between sample $F_n(x)$ and population $F(x)$ cumulative distribution.

| Number of trials, $n$ | Level of significance, $\alpha$ | | | |
|---|---|---|---|---|
| | 0.10 | 0.05 | 0.02 | 0.01 |
| 1 | 0.95000 | 0.97500 | 0.99000 | 0.99500 |
| 2 | 0.77639 | 0.84189 | 0.90000 | 0.92929 |
| 3 | 0.63604 | 0.70760 | 0.78456 | 0.82900 |
| 4 | 0.56522 | 0.62394 | 0.68887 | 0.73424 |
| 5 | 0.50945 | 0.56328 | 0.62718 | 0.66853 |
| 6 | 0.46799 | 0.51926 | 0.57741 | 0.61661 |
| 7 | 0.43607 | 0.48342 | 0.53844 | 0.57581 |
| 8 | 0.40962 | 0.45427 | 0.50654 | 0.54179 |
| 9 | 0.38746 | 0.43001 | 0.47960 | 0.51332 |
| 10 | 0.36866 | 0.40925 | 0.45662 | 0.48893 |
| 11 | 0.35242 | 0.39122 | 0.43670 | 0.46770 |
| 12 | 0.33815 | 0.37543 | 0.41918 | 0.44905 |
| 13 | 0.32549 | 0.36143 | 0.40362 | 0.43247 |
| 14 | 0.31417 | 0.34890 | 0.38970 | 0.41762 |
| 15 | 0.30397 | 0.33760 | 0.37713 | 0.40420 |
| 16 | 0.29472 | 0.32733 | 0.36571 | 0.39201 |
| 17 | 0.28627 | 0.31796 | 0.35528 | 0.38086 |
| 18 | 0.27851 | 0.30936 | 0.34569 | 0.37062 |
| 19 | 0.27136 | 0.30143 | 0.33685 | 0.36117 |
| 20 | 0.26473 | 0.29408 | 0.32866 | 0.35241 |
| 21 | 0.25858 | 0.28724 | 0.32104 | 0.34427 |
| 22 | 0.25283 | 0.28087 | 0.31394 | 0.33666 |
| 23 | 0.24746 | 0.27490 | 0.30728 | 0.32954 |
| 24 | 0.24242 | 0.26931 | 0.30104 | 0.32286 |

*Practical Reliability Engineering*, Fifth Edition. Patrick D. T. O'Connor and Andre Kleyner.

Critical values, $d_{\alpha(n)}$[a], of the maximum absolute difference between sample $F_n(x)$ and population $F(x)$ cumulative distribution.

| Number of trials, $n$ | Level of significance, $\alpha$ | | | |
|---|---|---|---|---|
| | 0.10 | 0.05 | 0.02 | 0.01 |
| 25 | 0.23768 | 0.26404 | 0.29516 | 0.31657 |
| 26 | 0.23320 | 0.25907 | 0.28962 | 0.31064 |
| 27 | 0.22898 | 0.25438 | 0.28438 | 0.30502 |
| 28 | 0.22497 | 0.24993 | 0.27942 | 0.29971 |
| 29 | 0.22117 | 0.24571 | 0.27471 | 0.29466 |
| 30 | 0.21756 | 0.24170 | 0.27023 | 0.28987 |
| 31 | 0.21412 | 0.23788 | 0.26596 | 0.28530 |
| 32 | 0.21085 | 0.23424 | 0.26189 | 0.28094 |
| 33 | 0.20771 | 0.23076 | 0.25801 | 0.27677 |
| 34 | 0.20472 | 0.22743 | 0.25429 | 0.27279 |
| 35 | 0.20185 | 0.22425 | 0.26073 | 0.26897 |
| 36 | 0.19910 | 0.22119 | 0.24732 | 0.26532 |
| 37 | 0.19646 | 0.21826 | 0.24404 | 0.26180 |
| 38 | 0.19392 | 0.21544 | 0.24089 | 0.25843 |
| 39 | 0.19148 | 0.21273 | 0.23786 | 0.25518 |
| 40[b] | 0.18913 | 0.21012 | 0.23494 | 0.25205 |

[a] Values of $d_{\alpha(n)}$ such that $p(\max)|F^*(x) - F(x)| d^*(n) = \alpha$.

[b] $N > 40 \approx \frac{1.22}{N^{1/2}}, \frac{1.36}{N^{1/2}}, \frac{1.51}{N^{1/2}}$ and $\frac{1.63}{N^{1/2}}$ for the four levels of significance.