**Appendix 1. Table for the Run Rule**

Table for checking for too few or too many runs on a run chart, based on a five percent risk of failing the run test if the data were truly random

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Total number of data points on run chart not falling on median line | Lower limit for number of runs (less than this is ‘too few’) | Upper limit for number of runs (more than this is ‘too many’) |  | Total number of data points not falling on median | Lower limit | Upper limit |
| 10 | 3 | 9 |  | 36 | 13 | 25 |
| 11 | 3 | 10 |  | 37 | 13 | 25 |
| 12 | 3 | 11 |  | 38 | 14 | 26 |
| 13 | 4 | 11 |  | 39 | 14 | 26 |
| 14 | 4 | 12 |  | 40 | 15 | 27 |
| 15 | 5 | 12 |  | 41 | 15 | 27 |
| 16 | 5 | 13 |  | 42 | 16 | 28 |
| 17 | 5 | 13 |  | 43 | 16 | 28 |
| 18 | 6 | 14 |  | 44 | 17 | 29 |
| 19 | 6 | 15 |  | 45 | 17 | 30 |
| 20 | 6 | 16 |  | 46 | 17 | 31 |
| 21 | 7 | 16 |  | 47 | 18 | 31 |
| 22 | 7 | 17 |  | 48 | 18 | 32 |
| 23 | 7 | 17 |  | 49 | 19 | 32 |
| 24 | 8 | 18 |  | 50 | 19 | 33 |
| 25 | 8 | 18 |  | 51 | 20 | 33 |
| 26 | 9 | 19 |  | 52 | 20 | 34 |
| 27 | 10 | 19 |  | 53 | 21 | 34 |
| 28 | 10 | 20 |  | 54 | 21 | 35 |
| 29 | 10 | 20 |  | 55 | 22 | 35 |
| 30 | 11 | 21 |  | 56 | 22 | 36 |
| 31 | 11 | 22 |  | 57 | 23 | 36 |
| 32 | 11 | 23 |  | 58 | 23 | 37 |
| 33 | 12 | 23 |  | 59 | 24 | 38 |
| 34 | 12 | 24 |  | 60 | 24 | 38 |
| 35 | 12 | 24 |  |  |  |  |

*Source: Adapted from Swed FS and Eisenhart C. <15>*