

| Tamaño de muestra, $n$ | Gráfico $\bar{X}$ |       |       |        |       | Gráfico $S$ |       |       |       |       | Gráfico $R$ |       |       |       |  |
|------------------------|-------------------|-------|-------|--------|-------|-------------|-------|-------|-------|-------|-------------|-------|-------|-------|--|
|                        | $A$               | $A_2$ | $A_3$ | $c_4$  | $B_3$ | $B_4$       | $B_5$ | $B_6$ | $d_2$ | $d_3$ | $D_1$       | $D_2$ | $D_3$ | $D_4$ |  |
| 2                      | 2.121             | 1.880 | 2.659 | 0.7979 | 0     | 3.267       | 0     | 2.606 | 1.128 | 0.853 | 0           | 3.686 | 0     | 3.267 |  |
| 3                      | 1.732             | 1.023 | 1.954 | 0.8862 | 0     | 2.568       | 0     | 2.279 | 1.693 | 0.888 | 0           | 4.358 | 0     | 2.574 |  |
| 4                      | 1.500             | 0.729 | 1.628 | 0.9213 | 0     | 2.266       | 0     | 2.088 | 2.059 | 0.880 | 0           | 4.698 | 0     | 2.282 |  |
| 5                      | 1.342             | 0.577 | 1.427 | 0.9400 | 0     | 2.089       | 0     | 1.964 | 2.326 | 0.864 | 0           | 4.918 | 0     | 2.114 |  |
| 6                      | 1.225             | 0.483 | 1.287 | 0.9515 | 0.030 | 1.970       | 0.029 | 1.874 | 2.534 | 0.848 | 0           | 5.078 | 0     | 2.004 |  |
| 7                      | 1.134             | 0.419 | 1.182 | 0.9594 | 0.118 | 1.882       | 0.113 | 1.806 | 2.704 | 0.833 | 0.204       | 5.204 | 0.076 | 1.924 |  |
| 8                      | 1.061             | 0.373 | 1.099 | 0.9650 | 0.185 | 1.815       | 0.179 | 1.751 | 2.847 | 0.820 | 0.388       | 5.306 | 0.136 | 1.864 |  |
| 9                      | 1.000             | 0.337 | 1.032 | 0.9693 | 0.239 | 1.761       | 0.232 | 1.707 | 2.970 | 0.808 | 0.547       | 5.393 | 0.184 | 1.816 |  |
| 10                     | 0.949             | 0.308 | 0.975 | 0.9727 | 0.284 | 1.716       | 0.276 | 1.669 | 3.078 | 0.797 | 0.687       | 5.469 | 0.223 | 1.777 |  |
| 11                     | 0.905             | 0.285 | 0.927 | 0.9754 | 0.321 | 1.679       | 0.313 | 1.637 | 3.173 | 0.787 | 0.811       | 5.535 | 0.256 | 1.744 |  |
| 12                     | 0.866             | 0.266 | 0.886 | 0.9776 | 0.354 | 1.646       | 0.346 | 1.610 | 3.258 | 0.778 | 0.922       | 5.594 | 0.283 | 1.717 |  |
| 13                     | 0.832             | 0.249 | 0.850 | 0.9794 | 0.382 | 1.618       | 0.374 | 1.585 | 3.336 | 0.770 | 1.025       | 5.647 | 0.307 | 1.693 |  |
| 14                     | 0.802             | 0.235 | 0.817 | 0.9810 | 0.406 | 1.594       | 0.399 | 1.563 | 3.407 | 0.763 | 1.118       | 5.696 | 0.328 | 1.672 |  |
| 15                     | 0.775             | 0.223 | 0.789 | 0.9823 | 0.428 | 1.572       | 0.421 | 1.544 | 3.472 | 0.756 | 1.203       | 5.741 | 0.347 | 1.653 |  |
| 16                     | 0.750             | 0.212 | 0.763 | 0.9835 | 0.448 | 1.552       | 0.440 | 1.526 | 3.532 | 0.750 | 1.282       | 5.782 | 0.363 | 1.637 |  |
| 17                     | 0.728             | 0.203 | 0.739 | 0.9845 | 0.466 | 1.534       | 0.458 | 1.511 | 3.588 | 0.744 | 1.356       | 5.820 | 0.378 | 1.622 |  |
| 18                     | 0.707             | 0.194 | 0.718 | 0.9854 | 0.482 | 1.518       | 0.475 | 1.496 | 3.640 | 0.739 | 1.424       | 5.856 | 0.391 | 1.608 |  |
| 19                     | 0.688             | 0.187 | 0.698 | 0.9862 | 0.497 | 1.503       | 0.490 | 1.483 | 3.689 | 0.734 | 1.487       | 5.891 | 0.403 | 1.597 |  |
| 20                     | 0.671             | 0.180 | 0.680 | 0.9869 | 0.510 | 1.490       | 0.504 | 1.470 | 3.735 | 0.729 | 1.549       | 5.921 | 0.415 | 1.585 |  |
| 21                     | 0.655             | 0.173 | 0.663 | 0.9876 | 0.523 | 1.477       | 0.516 | 1.459 | 3.778 | 0.724 | 1.605       | 5.951 | 0.425 | 1.575 |  |
| 22                     | 0.640             | 0.167 | 0.647 | 0.9882 | 0.534 | 1.466       | 0.528 | 1.448 | 3.819 | 0.720 | 1.659       | 5.979 | 0.434 | 1.566 |  |
| 23                     | 0.626             | 0.162 | 0.633 | 0.9887 | 0.545 | 1.455       | 0.539 | 1.438 | 3.858 | 0.716 | 1.710       | 6.006 | 0.443 | 1.557 |  |
| 24                     | 0.612             | 0.157 | 0.619 | 0.9892 | 0.555 | 1.445       | 0.549 | 1.429 | 3.895 | 0.712 | 1.759       | 6.031 | 0.451 | 1.548 |  |
| 25                     | 0.600             | 0.153 | 0.606 | 0.9896 | 0.565 | 1.435       | 0.559 | 1.420 | 3.931 | 0.708 | 1.806       | 6.056 | 0.459 | 1.541 |  |

Tabla A.2: Constantes para construir los gráficos de control de variables con  $k = 3$