

Distribución Ji cuadrada

| v | α | | | | | | | | | | | | | | | | | | | | | | |
|-----|----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| | 0.999 | 0.995 | 0.99 | 0.98 | 0.975 | 0.95 | 0.9 | 0.8 | 0.75 | 0.7 | 0.6 | 0.5 | 0.4 | 0.3 | 0.25 | 0.2 | 0.1 | 0.05 | 0.025 | 0.02 | 0.01 | 0.005 | 0.001 |
| 1 | 2E-06 | .00004 | .00016 | 0.001 | 0.001 | 0.004 | 0.016 | 0.064 | 0.102 | 0.148 | 0.275 | 0.455 | 0.708 | 1.074 | 1.323 | 1.642 | 2.706 | 3.841 | 5.024 | 5.412 | 6.635 | 7.879 | 10.828 |
| 2 | 0.002 | 0.010 | 0.020 | 0.040 | 0.051 | 0.103 | 0.211 | 0.446 | 0.575 | 0.713 | 1.022 | 1.386 | 1.833 | 2.408 | 2.773 | 3.219 | 4.605 | 5.991 | 7.378 | 7.824 | 9.210 | 10.597 | 13.815 |
| 3 | 0.024 | 0.072 | 0.115 | 0.185 | 0.216 | 0.352 | 0.584 | 1.005 | 1.213 | 1.424 | 1.869 | 2.366 | 2.946 | 3.665 | 4.108 | 4.642 | 6.251 | 7.815 | 9.348 | 9.837 | 11.345 | 12.838 | 16.267 |
| 4 | 0.091 | 0.207 | 0.297 | 0.429 | 0.484 | 0.711 | 1.064 | 1.649 | 1.923 | 2.195 | 2.753 | 3.357 | 4.045 | 4.878 | 5.385 | 5.989 | 7.779 | 9.488 | 11.143 | 11.668 | 13.277 | 14.860 | 18.467 |
| 5 | 0.210 | 0.412 | 0.554 | 0.752 | 0.831 | 1.145 | 1.610 | 2.343 | 2.675 | 3.000 | 3.656 | 4.351 | 5.132 | 6.064 | 6.626 | 7.289 | 9.236 | 11.070 | 12.832 | 13.388 | 15.086 | 16.750 | 20.515 |
| 6 | 0.381 | 0.676 | 0.872 | 1.134 | 1.237 | 1.635 | 2.204 | 3.070 | 3.455 | 3.828 | 4.570 | 5.348 | 6.211 | 7.231 | 7.841 | 8.558 | 10.645 | 12.592 | 14.449 | 15.033 | 16.812 | 18.548 | 22.458 |
| 7 | 0.599 | 0.989 | 1.239 | 1.564 | 1.690 | 2.167 | 2.833 | 3.822 | 4.255 | 4.671 | 5.493 | 6.346 | 7.283 | 8.383 | 9.037 | 9.803 | 12.017 | 14.067 | 16.013 | 16.622 | 18.475 | 20.278 | 24.321 |
| 8 | 0.857 | 1.344 | 1.646 | 2.032 | 2.180 | 2.733 | 3.490 | 4.594 | 5.071 | 5.527 | 6.423 | 7.344 | 8.351 | 9.524 | 10.219 | 11.030 | 13.362 | 15.507 | 17.535 | 18.168 | 20.090 | 21.955 | 26.125 |
| 9 | 1.152 | 1.735 | 2.088 | 2.532 | 2.700 | 3.325 | 4.168 | 5.380 | 5.899 | 6.393 | 7.357 | 8.343 | 9.414 | 10.656 | 11.389 | 12.242 | 14.684 | 16.919 | 19.023 | 19.679 | 21.666 | 23.589 | 27.877 |
| 10 | 1.479 | 2.156 | 2.558 | 3.059 | 3.247 | 3.940 | 4.865 | 6.179 | 6.737 | 7.267 | 8.295 | 9.342 | 10.473 | 11.781 | 12.549 | 13.442 | 15.987 | 18.307 | 20.483 | 21.161 | 23.209 | 25.188 | 29.588 |
| 11 | 1.834 | 2.603 | 3.054 | 3.609 | 3.816 | 4.575 | 5.578 | 6.989 | 7.584 | 8.148 | 9.237 | 10.341 | 11.530 | 12.899 | 13.701 | 14.631 | 17.275 | 19.675 | 21.920 | 22.618 | 24.725 | 26.757 | 31.264 |
| 12 | 2.214 | 3.074 | 3.571 | 4.178 | 4.404 | 5.226 | 6.304 | 7.807 | 8.438 | 9.034 | 10.182 | 11.340 | 12.584 | 14.011 | 14.845 | 15.812 | 18.549 | 21.026 | 23.337 | 24.054 | 26.217 | 28.299 | 32.909 |
| 13 | 2.617 | 3.565 | 4.107 | 4.765 | 5.009 | 5.892 | 7.042 | 8.634 | 9.299 | 9.926 | 11.129 | 12.340 | 13.636 | 15.119 | 15.984 | 16.985 | 19.812 | 22.362 | 24.736 | 25.472 | 27.688 | 29.819 | 34.529 |
| 14 | 3.041 | 4.075 | 4.660 | 5.368 | 5.629 | 6.571 | 7.790 | 9.467 | 10.165 | 10.821 | 12.078 | 13.339 | 14.685 | 16.222 | 17.117 | 18.151 | 21.064 | 23.685 | 26.119 | 26.873 | 29.141 | 31.319 | 36.124 |
| 15 | 3.483 | 4.601 | 5.229 | 5.985 | 6.262 | 7.261 | 8.547 | 10.367 | 11.037 | 11.721 | 13.030 | 14.339 | 15.733 | 17.322 | 18.245 | 19.311 | 22.307 | 24.996 | 27.488 | 28.260 | 30.578 | 32.801 | 37.698 |
| 16 | 3.942 | 5.142 | 5.812 | 6.614 | 6.908 | 7.962 | 9.312 | 11.152 | 11.912 | 12.624 | 13.983 | 15.339 | 16.780 | 18.418 | 19.369 | 20.465 | 23.542 | 26.296 | 28.845 | 29.633 | 32.000 | 34.267 | 39.253 |
| 17 | 4.416 | 5.697 | 6.408 | 7.255 | 7.564 | 8.672 | 10.085 | 12.002 | 12.792 | 13.531 | 14.937 | 16.338 | 17.824 | 19.511 | 20.489 | 21.615 | 24.769 | 27.587 | 30.191 | 30.995 | 33.409 | 35.719 | 40.790 |
| 18 | 4.905 | 6.265 | 7.015 | 7.906 | 8.231 | 9.390 | 10.865 | 12.857 | 13.675 | 14.440 | 15.893 | 17.338 | 18.868 | 20.601 | 21.605 | 22.760 | 25.989 | 28.869 | 31.526 | 32.346 | 34.805 | 37.156 | 42.312 |
| 19 | 5.407 | 6.844 | 7.633 | 8.567 | 8.906 | 10.117 | 11.651 | 13.716 | 14.562 | 15.352 | 16.850 | 18.338 | 19.910 | 21.689 | 22.718 | 23.900 | 27.204 | 30.144 | 32.852 | 33.687 | 36.191 | 38.582 | 43.821 |
| 20 | 5.921 | 7.434 | 8.260 | 9.237 | 9.591 | 10.851 | 12.443 | 14.578 | 15.452 | 16.266 | 17.809 | 19.337 | 20.951 | 22.775 | 23.828 | 25.037 | 28.412 | 31.410 | 34.170 | 35.020 | 37.566 | 39.997 | 45.315 |
| 21 | 6.446 | 8.034 | 8.897 | 9.915 | 10.283 | 11.591 | 13.240 | 15.445 | 16.344 | 17.182 | 18.768 | 20.337 | 21.992 | 23.858 | 24.935 | 26.171 | 29.615 | 32.671 | 35.479 | 36.343 | 38.932 | 41.401 | 46.797 |
| 22 | 6.983 | 8.643 | 9.542 | 10.600 | 10.982 | 12.338 | 14.041 | 16.314 | 17.240 | 18.101 | 19.729 | 21.337 | 23.031 | 24.939 | 26.039 | 27.301 | 30.813 | 33.924 | 36.781 | 37.659 | 40.289 | 42.796 | 48.268 |
| 23 | 7.529 | 9.260 | 10.196 | 11.293 | 11.689 | 13.091 | 14.848 | 17.187 | 18.137 | 19.021 | 20.690 | 22.337 | 24.069 | 26.018 | 27.141 | 28.429 | 32.007 | 35.172 | 38.076 | 38.968 | 41.638 | 44.181 | 49.728 |
| 24 | 8.085 | 9.886 | 10.856 | 11.992 | 12.401 | 13.848 | 15.659 | 18.062 | 19.037 | 19.943 | 21.652 | 23.337 | 25.106 | 27.096 | 28.241 | 29.553 | 33.196 | 36.415 | 39.364 | 40.270 | 42.980 | 45.559 | 51.179 |
| 25 | 8.649 | 10.520 | 11.524 | 12.697 | 13.120 | 14.611 | 16.473 | 18.940 | 19.939 | 20.867 | 22.616 | 24.337 | 26.143 | 28.172 | 29.339 | 30.675 | 34.382 | 37.652 | 40.646 | 41.566 | 44.314 | 46.928 | 52.620 |
| 26 | 9.222 | 11.160 | 12.198 | 13.409 | 13.844 | 15.379 | 17.292 | 19.820 | 20.843 | 21.792 | 23.579 | 25.336 | 27.179 | 29.246 | 30.435 | 31.795 | 35.563 | 38.885 | 41.923 | 42.856 | 45.642 | 48.290 | 54.052 |
| 27 | 9.803 | 11.808 | 12.879 | 14.125 | 14.573 | 16.151 | 18.114 | 20.703 | 21.749 | 22.719 | 24.544 | 26.336 | 28.214 | 30.319 | 31.528 | 32.912 | 36.741 | 40.113 | 43.195 | 44.140 | 46.963 | 49.645 | 55.477 |
| 28 | 10.391 | 12.461 | 13.565 | 14.847 | 15.308 | 16.928 | 18.939 | 21.588 | 22.657 | 23.647 | 25.509 | 27.336 | 29.249 | 31.391 | 32.621 | 34.027 | 37.916 | 41.337 | 44.461 | 45.419 | 48.278 | 50.993 | 56.892 |
| 29 | 10.986 | 13.121 | 14.256 | 15.574 | 16.047 | 17.708 | 19.768 | 22.475 | 23.567 | 24.577 | 26.475 | 28.336 | 30.283 | 32.461 | 33.711 | 35.139 | 39.087 | 42.557 | 45.722 | 46.693 | 49.588 | 52.336 | 58.301 |
| 30 | 11.588 | 13.787 | 14.953 | 16.306 | 16.791 | 18.493 | 20.599 | 23.364 | 24.478 | 25.508 | 27.442 | 29.336 | 31.316 | 33.530 | 34.800 | 36.250 | 40.256 | 43.773 | 46.979 | 47.962 | 50.892 | 53.672 | 59.702 |
| 31 | 12.196 | 14.458 | 15.655 | 17.042 | 17.539 | 19.281 | 21.434 | 24.255 | 25.390 | 26.440 | 28.409 | 30.336 | 32.349 | 34.598 | 35.887 | 37.359 | 41.422 | 44.985 | 48.232 | 49.226 | 52.191 | 55.003 | 61.098 |
| 32 | 12.810 | 15.134 | 16.362 | 17.783 | 18.291 | 20.072 | 22.271 | 25.148 | 26.304 | 27.373 | 29.376 | 31.336 | 33.381 | 35.665 | 36.973 | 38.466 | 42.585 | 46.194 | 49.480 | 50.487 | 53.486 | 56.328 | 62.487 |
| 33 | 13.431 | 15.815 | 17.073 | 18.527 | 19.047 | 20.867 | 23.110 | 26.042 | 27.219 | 28.307 | 30.344 | 32.336 | 34.413 | 36.731 | 38.058 | 39.572 | 43.745 | 47.400 | 50.725 | 51.743 | 54.775 | 57.648 | 63.870 |
| 34 | 14.057 | 16.501 | 17.789 | 19.275 | 19.806 | 21.664 | 23.952 | 26.938 | 28.136 | 29.242 | 31.313 | 33.336 | 35.444 | 37.795 | 39.141 | 40.676 | 44.903 | 48.602 | 51.966 | 52.995 | 56.061 | 58.964 | 65.246 |
| 35 | 14.688 | 17.192 | 18.509 | 20.027 | 20.569 | 22.465 | 24.797 | 27.836 | 29.054 | 30.178 | 32.282 | 34.336 | 36.475 | 38.859 | 40.223 | 41.778 | 46.059 | 49.802 | 53.203 | 54.244 | 57.342 | 60.275 | 66.620 |
| 40 | 17.916 | 20.707 | 22.164 | 23.838 | 24.433 | 26.509 | 29.051 | 32.345 | 33.660 | 34.872 | 37.134 | 39.335 | 41.622 | 44.165 | 45.616 | 47.269 | 51.805 | 55.759 | 59.342 | 60.436 | 63.691 | 66.766 | 73.402 |
| 45 | 21.250 | 24.311 | 25.901 | 27.720 | 28.366 | 30.612 | 33.350 | 36.884 | 38.291 | 39.585 | 41.995 | 44.335 | 46.761 | 49.452 | 50.985 | 52.729 | 57.505 | 61.656 | 65.410 | 66.555 | 69.957 | 73.166 | 80.077 |
| 50 | 24.674 | 27.991 | 29.707 | 31.664 | 32.357 | 34.764 | 37.689 | 41.449 | 42.942 | 44.313 | 46.864 | 49.335 | 51.892 | 54.723 | 56.334 | 58.164 | 63.167 | 67.505 | 71.420 | 72.613 | 76.154 | 79.490 | 86.660 |
| 55 | 28.174 | 31.735 | 33.570 | 35.659 | 36.398 | 38.958 | 42.060 | 46.036 | 47.610 | 49.055 | 51.739 | 54.335 | 57.016 | 59.980 | 61.665 | 63.577 | 68.796 | 73.311 | 77.380 | 78.619 | 82.292 | 85.749 | 93.167 |
| 60 | 31.738 | 35.535 | 37.485 | 39.699 | 40.482 | 43.188 | 46.459 | 50.641 | 52.294 | 53.809 | 56.620 | 59.335 | 62.135 | 65.227 | 66.981 | 68.972 | 74.397 | 79.082 | 83.298 | 84.580 | 88.379 | 91.952 | 99.607 |
| 65 | 35.361 | 39.383 | 41.444 | 43.779 | 44.603 | 47.450 | 50.883 | 55.262 | 56.990 | 58.573 | 61.506 | 64.335 | 67.249 | 70.462 | 72.285 | 74.351 | 79.973 | 84.821 | 89.177 | 90.501 | 94.422 | 98.105 | 105.99 |
| 70 | 39.036 | 43.275 | 45.442 | 47.893 | 48.758 | 51.739 | 55.329 | 59.898 | 61.698 | 63.346 | 66.396 | 69.334 | 72.358 | 75.689 | 77.577 | 79.715 | 85.527 | 90.531 | 95.023 | 96.388 | 100.43 | 104.21 | 112.32 |
| 75 | 42.757 | 47.206 | 49.475 | 52.039 | 52.942 | 56.054 | 59.795 | 64.547 | 66.417 | 68.127 | 71.290 | 74.334 | 77.464 | 80.908 | 82.858 | 85.066 | 91.061 | 96.217 | 100.84 | 102.24 | 106.39 | 110.29 | 118.60 |
| 80 | 46.520 | 51.172 | 53.540 | 56.213 | 57.153 | 60.391 | 64.278 | 69.207 | 71.145 | 72.915 | 76.188 | 79.334 | 82.566 | 86.120 | 88.130 | 90.405 | 96.578 | 101.88 | 106.63 | 108.07 | 112.33 | 116.32 | 124.84 |
| 90 | 54.155 | 59.196 | 61.754 | 64.635 | 65.647 | 69.126 | 73.291 | 78.558 | 80.625 | 82.511 | 85.993 | 89.334 | 92.761 | 96.524 | 98.650 | 101.05 | 107.56 | 113.15 | 118.14 | 119.65 | 124.12 | 128.30 | 137.21 |
| 100 | 61.918 | 67.328 | 70.065 | 73.142 | 74.222 | 77.929 | 82.358 | 87.945 | 90.133 | 92.129 | 95.808 | 99.334 | 102.95 | 106.91 | 109.51 | 111.67 | 118.50 | 124.34 | 129.56 | 131.14 | 135.81 | | |

Distribución t de Student

| v | α | | | | | | | | | | | | | | |
|----------|----------|--------|--------|--------|--------|--------|--------|--------|--------|-------|-------|-------|-------|-------|-------|
| | 0.001 | 0.002 | 0.003 | 0.004 | 0.005 | 0.01 | 0.015 | 0.02 | 0.025 | 0.05 | 0.075 | 0.1 | 0.2 | 0.3 | 0.4 |
| 1 | 318.29 | 159.14 | 106.10 | 79.572 | 63.656 | 31.821 | 21.205 | 15.894 | 12.706 | 6.314 | 4.165 | 3.078 | 1.376 | 0.727 | 0.325 |
| 2 | 22.328 | 15.764 | 12.852 | 11.113 | 9.925 | 6.965 | 5.643 | 4.849 | 4.303 | 2.920 | 2.282 | 1.886 | 1.061 | 0.617 | 0.289 |
| 3 | 10.214 | 8.052 | 6.994 | 6.322 | 5.841 | 4.541 | 3.896 | 3.482 | 3.182 | 2.353 | 1.924 | 1.638 | 0.978 | 0.584 | 0.277 |
| 4 | 7.173 | 5.951 | 5.321 | 4.908 | 4.604 | 3.747 | 3.298 | 2.999 | 2.776 | 2.132 | 1.778 | 1.533 | 0.941 | 0.569 | 0.271 |
| 5 | 5.894 | 5.030 | 4.570 | 4.262 | 4.032 | 3.365 | 3.003 | 2.757 | 2.571 | 2.015 | 1.699 | 1.476 | 0.920 | 0.559 | 0.267 |
| 6 | 5.208 | 4.524 | 4.152 | 3.898 | 3.707 | 3.143 | 2.829 | 2.612 | 2.447 | 1.943 | 1.650 | 1.440 | 0.906 | 0.553 | 0.265 |
| 7 | 4.785 | 4.207 | 3.887 | 3.667 | 3.499 | 2.998 | 2.715 | 2.517 | 2.365 | 1.895 | 1.617 | 1.415 | 0.896 | 0.549 | 0.263 |
| 8 | 4.501 | 3.991 | 3.705 | 3.507 | 3.355 | 2.896 | 2.634 | 2.449 | 2.306 | 1.860 | 1.592 | 1.397 | 0.889 | 0.546 | 0.262 |
| 9 | 4.297 | 3.835 | 3.573 | 3.390 | 3.250 | 2.821 | 2.574 | 2.398 | 2.262 | 1.833 | 1.574 | 1.383 | 0.883 | 0.543 | 0.261 |
| 10 | 4.144 | 3.716 | 3.472 | 3.301 | 3.169 | 2.764 | 2.527 | 2.359 | 2.228 | 1.812 | 1.559 | 1.372 | 0.879 | 0.542 | 0.260 |
| 11 | 4.025 | 3.624 | 3.393 | 3.231 | 3.106 | 2.718 | 2.491 | 2.328 | 2.201 | 1.796 | 1.548 | 1.363 | 0.876 | 0.540 | 0.260 |
| 12 | 3.930 | 3.550 | 3.330 | 3.175 | 3.055 | 2.681 | 2.461 | 2.303 | 2.179 | 1.782 | 1.538 | 1.356 | 0.873 | 0.539 | 0.259 |
| 13 | 3.852 | 3.489 | 3.278 | 3.128 | 3.012 | 2.650 | 2.436 | 2.282 | 2.160 | 1.771 | 1.530 | 1.350 | 0.870 | 0.538 | 0.259 |
| 14 | 3.787 | 3.438 | 3.234 | 3.089 | 2.977 | 2.624 | 2.415 | 2.264 | 2.145 | 1.761 | 1.523 | 1.345 | 0.868 | 0.537 | 0.258 |
| 15 | 3.733 | 3.395 | 3.197 | 3.056 | 2.947 | 2.602 | 2.397 | 2.249 | 2.131 | 1.753 | 1.517 | 1.341 | 0.866 | 0.536 | 0.258 |
| 16 | 3.686 | 3.358 | 3.165 | 3.028 | 2.921 | 2.583 | 2.382 | 2.235 | 2.120 | 1.746 | 1.512 | 1.337 | 0.865 | 0.535 | 0.258 |
| 17 | 3.646 | 3.326 | 3.138 | 3.003 | 2.898 | 2.567 | 2.368 | 2.224 | 2.110 | 1.740 | 1.508 | 1.333 | 0.863 | 0.534 | 0.257 |
| 18 | 3.610 | 3.298 | 3.113 | 2.982 | 2.878 | 2.552 | 2.356 | 2.214 | 2.101 | 1.734 | 1.504 | 1.330 | 0.862 | 0.534 | 0.257 |
| 19 | 3.579 | 3.273 | 3.092 | 2.962 | 2.861 | 2.539 | 2.346 | 2.205 | 2.093 | 1.729 | 1.500 | 1.328 | 0.861 | 0.533 | 0.257 |
| 20 | 3.552 | 3.251 | 3.073 | 2.945 | 2.845 | 2.528 | 2.336 | 2.197 | 2.086 | 1.725 | 1.497 | 1.325 | 0.860 | 0.533 | 0.257 |
| 21 | 3.527 | 3.231 | 3.056 | 2.930 | 2.831 | 2.518 | 2.328 | 2.189 | 2.080 | 1.721 | 1.494 | 1.323 | 0.859 | 0.532 | 0.257 |
| 22 | 3.505 | 3.214 | 3.041 | 2.916 | 2.819 | 2.508 | 2.320 | 2.183 | 2.074 | 1.717 | 1.492 | 1.321 | 0.858 | 0.532 | 0.256 |
| 23 | 3.485 | 3.198 | 3.027 | 2.904 | 2.807 | 2.500 | 2.313 | 2.177 | 2.069 | 1.714 | 1.489 | 1.319 | 0.858 | 0.532 | 0.256 |
| 24 | 3.467 | 3.183 | 3.014 | 2.892 | 2.797 | 2.492 | 2.307 | 2.172 | 2.064 | 1.711 | 1.487 | 1.318 | 0.857 | 0.531 | 0.256 |
| 25 | 3.450 | 3.170 | 3.003 | 2.882 | 2.787 | 2.485 | 2.301 | 2.167 | 2.060 | 1.708 | 1.485 | 1.316 | 0.856 | 0.531 | 0.256 |
| 26 | 3.435 | 3.158 | 2.992 | 2.873 | 2.779 | 2.479 | 2.296 | 2.162 | 2.056 | 1.706 | 1.483 | 1.315 | 0.856 | 0.531 | 0.256 |
| 27 | 3.421 | 3.146 | 2.982 | 2.864 | 2.771 | 2.473 | 2.291 | 2.158 | 2.052 | 1.703 | 1.482 | 1.314 | 0.855 | 0.531 | 0.256 |
| 28 | 3.408 | 3.136 | 2.973 | 2.856 | 2.763 | 2.467 | 2.286 | 2.154 | 2.048 | 1.701 | 1.480 | 1.313 | 0.855 | 0.530 | 0.256 |
| 29 | 3.396 | 3.127 | 2.965 | 2.848 | 2.756 | 2.462 | 2.282 | 2.150 | 2.045 | 1.699 | 1.479 | 1.311 | 0.854 | 0.530 | 0.256 |
| 30 | 3.385 | 3.118 | 2.957 | 2.841 | 2.750 | 2.457 | 2.278 | 2.147 | 2.042 | 1.697 | 1.477 | 1.310 | 0.854 | 0.530 | 0.256 |
| 31 | 3.375 | 3.109 | 2.950 | 2.835 | 2.744 | 2.453 | 2.275 | 2.144 | 2.040 | 1.696 | 1.476 | 1.309 | 0.853 | 0.530 | 0.256 |
| 32 | 3.365 | 3.102 | 2.943 | 2.829 | 2.738 | 2.449 | 2.271 | 2.141 | 2.037 | 1.694 | 1.475 | 1.309 | 0.853 | 0.530 | 0.255 |
| 33 | 3.356 | 3.094 | 2.937 | 2.823 | 2.733 | 2.445 | 2.268 | 2.138 | 2.035 | 1.692 | 1.474 | 1.308 | 0.853 | 0.530 | 0.255 |
| 34 | 3.348 | 3.088 | 2.931 | 2.818 | 2.728 | 2.441 | 2.265 | 2.136 | 2.032 | 1.691 | 1.473 | 1.307 | 0.852 | 0.529 | 0.255 |
| 35 | 3.340 | 3.081 | 2.926 | 2.813 | 2.724 | 2.438 | 2.262 | 2.133 | 2.030 | 1.690 | 1.472 | 1.306 | 0.852 | 0.529 | 0.255 |
| 40 | 3.307 | 3.055 | 2.902 | 2.792 | 2.704 | 2.423 | 2.250 | 2.123 | 2.021 | 1.684 | 1.468 | 1.303 | 0.851 | 0.529 | 0.255 |
| 45 | 3.281 | 3.034 | 2.884 | 2.776 | 2.690 | 2.412 | 2.241 | 2.115 | 2.014 | 1.679 | 1.465 | 1.301 | 0.850 | 0.528 | 0.255 |
| 50 | 3.261 | 3.018 | 2.870 | 2.763 | 2.678 | 2.403 | 2.234 | 2.109 | 2.009 | 1.676 | 1.462 | 1.299 | 0.849 | 0.528 | 0.255 |
| 55 | 3.245 | 3.004 | 2.859 | 2.752 | 2.668 | 2.396 | 2.228 | 2.104 | 2.004 | 1.673 | 1.460 | 1.297 | 0.848 | 0.527 | 0.255 |
| 60 | 3.232 | 2.994 | 2.849 | 2.744 | 2.660 | 2.390 | 2.223 | 2.099 | 2.000 | 1.671 | 1.458 | 1.296 | 0.848 | 0.527 | 0.254 |
| 65 | 3.220 | 2.984 | 2.841 | 2.736 | 2.654 | 2.385 | 2.219 | 2.096 | 1.997 | 1.669 | 1.457 | 1.295 | 0.847 | 0.527 | 0.254 |
| 70 | 3.211 | 2.977 | 2.834 | 2.730 | 2.648 | 2.381 | 2.215 | 2.093 | 1.994 | 1.667 | 1.456 | 1.294 | 0.847 | 0.527 | 0.254 |
| 75 | 3.202 | 2.970 | 2.828 | 2.725 | 2.643 | 2.377 | 2.212 | 2.090 | 1.992 | 1.665 | 1.454 | 1.293 | 0.846 | 0.527 | 0.254 |
| 80 | 3.195 | 2.964 | 2.823 | 2.720 | 2.639 | 2.374 | 2.209 | 2.088 | 1.990 | 1.664 | 1.453 | 1.292 | 0.846 | 0.526 | 0.254 |
| 90 | 3.183 | 2.954 | 2.815 | 2.713 | 2.632 | 2.368 | 2.205 | 2.084 | 1.987 | 1.662 | 1.452 | 1.291 | 0.846 | 0.526 | 0.254 |
| 100 | 3.174 | 2.946 | 2.808 | 2.706 | 2.626 | 2.364 | 2.201 | 2.081 | 1.984 | 1.660 | 1.451 | 1.290 | 0.845 | 0.526 | 0.254 |
| 150 | 3.145 | 2.923 | 2.787 | 2.688 | 2.609 | 2.351 | 2.191 | 2.072 | 1.976 | 1.655 | 1.447 | 1.287 | 0.844 | 0.526 | 0.254 |
| ∞ | 3.090 | 2.878 | 2.748 | 2.652 | 2.576 | 2.326 | 2.170 | 2.054 | 1.960 | 1.645 | 1.440 | 1.282 | 0.842 | 0.524 | 0.253 |

Tabla 5. VALORES F DE LA DISTRIBUCIÓN F DE FISHER

1 - $\alpha = 0.9$

v_1 = grados de libertad del numerador

1 - $\alpha = P (F \leq f_{\alpha, v_1, v_2})$

v_2 = grados de libertad del denominador

| $v_2 \backslash v_1$ | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|----------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1 | 39.864 | 49.500 | 53.593 | 55.833 | 57.240 | 58.204 | 58.906 | 59.439 | 59.857 | 60.195 | 60.473 | 60.705 | 60.902 | 61.073 | 61.220 | 61.350 | 61.465 | 61.566 | 61.658 | 61.740 |
| 2 | 8.526 | 9.000 | 9.162 | 9.243 | 9.293 | 9.326 | 9.349 | 9.367 | 9.381 | 9.392 | 9.401 | 9.408 | 9.415 | 9.420 | 9.425 | 9.429 | 9.433 | 9.436 | 9.439 | 9.441 |
| 3 | 5.538 | 5.462 | 5.391 | 5.343 | 5.309 | 5.285 | 5.266 | 5.252 | 5.240 | 5.230 | 5.222 | 5.216 | 5.210 | 5.205 | 5.200 | 5.196 | 5.193 | 5.190 | 5.187 | 5.184 |
| 4 | 4.545 | 4.325 | 4.191 | 4.107 | 4.051 | 4.010 | 3.979 | 3.955 | 3.936 | 3.920 | 3.907 | 3.896 | 3.886 | 3.878 | 3.870 | 3.864 | 3.858 | 3.853 | 3.848 | 3.844 |
| 5 | 4.060 | 3.780 | 3.619 | 3.520 | 3.453 | 3.405 | 3.368 | 3.339 | 3.316 | 3.297 | 3.282 | 3.268 | 3.257 | 3.247 | 3.238 | 3.230 | 3.223 | 3.217 | 3.212 | 3.207 |
| 6 | 3.776 | 3.463 | 3.289 | 3.181 | 3.108 | 3.055 | 3.014 | 2.983 | 2.958 | 2.937 | 2.920 | 2.905 | 2.892 | 2.881 | 2.871 | 2.863 | 2.855 | 2.848 | 2.842 | 2.836 |
| 7 | 3.589 | 3.257 | 3.074 | 2.961 | 2.883 | 2.827 | 2.785 | 2.752 | 2.725 | 2.703 | 2.684 | 2.668 | 2.654 | 2.643 | 2.632 | 2.623 | 2.615 | 2.607 | 2.601 | 2.595 |
| 8 | 3.458 | 3.113 | 2.924 | 2.806 | 2.726 | 2.668 | 2.624 | 2.589 | 2.561 | 2.538 | 2.519 | 2.502 | 2.488 | 2.475 | 2.464 | 2.454 | 2.446 | 2.438 | 2.431 | 2.425 |
| 9 | 3.360 | 3.006 | 2.813 | 2.693 | 2.611 | 2.551 | 2.505 | 2.469 | 2.440 | 2.416 | 2.396 | 2.379 | 2.364 | 2.351 | 2.340 | 2.330 | 2.320 | 2.312 | 2.305 | 2.298 |
| 10 | 3.285 | 2.924 | 2.728 | 2.605 | 2.522 | 2.461 | 2.414 | 2.377 | 2.347 | 2.323 | 2.302 | 2.284 | 2.269 | 2.255 | 2.244 | 2.233 | 2.224 | 2.215 | 2.208 | 2.201 |
| 11 | 3.225 | 2.860 | 2.660 | 2.536 | 2.451 | 2.389 | 2.342 | 2.304 | 2.274 | 2.248 | 2.227 | 2.209 | 2.193 | 2.179 | 2.167 | 2.156 | 2.147 | 2.138 | 2.130 | 2.123 |
| 12 | 3.177 | 2.807 | 2.606 | 2.480 | 2.394 | 2.331 | 2.283 | 2.245 | 2.214 | 2.188 | 2.166 | 2.147 | 2.131 | 2.117 | 2.105 | 2.094 | 2.084 | 2.075 | 2.067 | 2.060 |
| 13 | 3.136 | 2.763 | 2.560 | 2.434 | 2.347 | 2.283 | 2.234 | 2.195 | 2.164 | 2.138 | 2.116 | 2.097 | 2.080 | 2.066 | 2.053 | 2.042 | 2.032 | 2.023 | 2.014 | 2.007 |
| 14 | 3.102 | 2.726 | 2.522 | 2.395 | 2.307 | 2.243 | 2.193 | 2.154 | 2.122 | 2.095 | 2.073 | 2.054 | 2.037 | 2.022 | 2.010 | 1.998 | 1.988 | 1.978 | 1.970 | 1.962 |
| 15 | 3.073 | 2.695 | 2.490 | 2.361 | 2.273 | 2.208 | 2.158 | 2.119 | 2.086 | 2.059 | 2.037 | 2.017 | 2.000 | 1.985 | 1.972 | 1.961 | 1.950 | 1.941 | 1.932 | 1.924 |
| 16 | 3.048 | 2.668 | 2.462 | 2.333 | 2.244 | 2.178 | 2.128 | 2.088 | 2.055 | 2.028 | 2.005 | 1.985 | 1.968 | 1.953 | 1.940 | 1.928 | 1.917 | 1.908 | 1.899 | 1.891 |
| 17 | 3.026 | 2.645 | 2.437 | 2.308 | 2.218 | 2.152 | 2.102 | 2.061 | 2.028 | 2.001 | 1.978 | 1.958 | 1.940 | 1.925 | 1.912 | 1.900 | 1.889 | 1.879 | 1.870 | 1.862 |
| 18 | 3.007 | 2.624 | 2.416 | 2.286 | 2.196 | 2.130 | 2.079 | 2.038 | 2.005 | 1.977 | 1.954 | 1.933 | 1.916 | 1.900 | 1.887 | 1.875 | 1.864 | 1.854 | 1.845 | 1.837 |
| 19 | 2.990 | 2.606 | 2.397 | 2.266 | 2.176 | 2.109 | 2.058 | 2.017 | 1.984 | 1.956 | 1.932 | 1.912 | 1.894 | 1.878 | 1.865 | 1.852 | 1.841 | 1.831 | 1.822 | 1.814 |
| 20 | 2.975 | 2.589 | 2.380 | 2.249 | 2.158 | 2.091 | 2.040 | 1.999 | 1.965 | 1.937 | 1.913 | 1.892 | 1.875 | 1.859 | 1.845 | 1.833 | 1.821 | 1.811 | 1.802 | 1.794 |
| 21 | 2.961 | 2.575 | 2.365 | 2.233 | 2.142 | 2.075 | 2.023 | 1.982 | 1.948 | 1.920 | 1.896 | 1.875 | 1.857 | 1.841 | 1.827 | 1.815 | 1.803 | 1.793 | 1.784 | 1.776 |
| 22 | 2.949 | 2.561 | 2.351 | 2.219 | 2.128 | 2.060 | 2.008 | 1.967 | 1.933 | 1.904 | 1.880 | 1.859 | 1.841 | 1.825 | 1.811 | 1.798 | 1.787 | 1.777 | 1.768 | 1.759 |
| 23 | 2.937 | 2.549 | 2.339 | 2.207 | 2.115 | 2.047 | 1.995 | 1.953 | 1.919 | 1.890 | 1.866 | 1.845 | 1.827 | 1.811 | 1.796 | 1.784 | 1.772 | 1.762 | 1.753 | 1.744 |
| 24 | 2.927 | 2.538 | 2.327 | 2.195 | 2.103 | 2.035 | 1.983 | 1.941 | 1.906 | 1.877 | 1.853 | 1.832 | 1.814 | 1.797 | 1.783 | 1.770 | 1.759 | 1.748 | 1.739 | 1.730 |
| 25 | 2.918 | 2.528 | 2.317 | 2.184 | 2.092 | 2.024 | 1.971 | 1.929 | 1.895 | 1.866 | 1.841 | 1.820 | 1.802 | 1.785 | 1.771 | 1.758 | 1.746 | 1.736 | 1.726 | 1.718 |
| 26 | 2.909 | 2.519 | 2.307 | 2.174 | 2.082 | 2.014 | 1.961 | 1.919 | 1.884 | 1.855 | 1.830 | 1.809 | 1.790 | 1.774 | 1.760 | 1.747 | 1.735 | 1.724 | 1.715 | 1.706 |
| 27 | 2.901 | 2.511 | 2.299 | 2.165 | 2.073 | 2.005 | 1.952 | 1.909 | 1.874 | 1.845 | 1.820 | 1.799 | 1.780 | 1.764 | 1.749 | 1.736 | 1.724 | 1.714 | 1.704 | 1.695 |
| 28 | 2.894 | 2.503 | 2.291 | 2.157 | 2.064 | 1.996 | 1.943 | 1.900 | 1.865 | 1.836 | 1.811 | 1.790 | 1.771 | 1.754 | 1.740 | 1.726 | 1.715 | 1.704 | 1.694 | 1.685 |
| 29 | 2.887 | 2.495 | 2.283 | 2.149 | 2.057 | 1.988 | 1.935 | 1.892 | 1.857 | 1.827 | 1.802 | 1.781 | 1.762 | 1.745 | 1.731 | 1.717 | 1.705 | 1.695 | 1.685 | 1.676 |
| 30 | 2.881 | 2.489 | 2.276 | 2.142 | 2.049 | 1.980 | 1.927 | 1.884 | 1.849 | 1.819 | 1.794 | 1.773 | 1.754 | 1.737 | 1.722 | 1.709 | 1.697 | 1.686 | 1.676 | 1.667 |
| 40 | 2.835 | 2.440 | 2.226 | 2.091 | 1.997 | 1.927 | 1.873 | 1.829 | 1.793 | 1.763 | 1.737 | 1.715 | 1.695 | 1.678 | 1.662 | 1.649 | 1.636 | 1.625 | 1.615 | 1.605 |
| 50 | 2.809 | 2.412 | 2.197 | 2.061 | 1.966 | 1.895 | 1.840 | 1.796 | 1.760 | 1.729 | 1.703 | 1.680 | 1.660 | 1.643 | 1.627 | 1.613 | 1.600 | 1.588 | 1.578 | 1.568 |
| 60 | 2.791 | 2.393 | 2.177 | 2.041 | 1.946 | 1.875 | 1.819 | 1.775 | 1.738 | 1.707 | 1.680 | 1.657 | 1.637 | 1.619 | 1.603 | 1.589 | 1.576 | 1.564 | 1.553 | 1.543 |
| 70 | 2.779 | 2.380 | 2.164 | 2.027 | 1.931 | 1.860 | 1.804 | 1.760 | 1.723 | 1.691 | 1.665 | 1.641 | 1.621 | 1.603 | 1.587 | 1.572 | 1.559 | 1.547 | 1.536 | 1.526 |
| 80 | 2.769 | 2.370 | 2.154 | 2.016 | 1.921 | 1.849 | 1.793 | 1.748 | 1.711 | 1.680 | 1.653 | 1.629 | 1.609 | 1.590 | 1.574 | 1.559 | 1.546 | 1.534 | 1.523 | 1.513 |
| 90 | 2.762 | 2.363 | 2.146 | 2.008 | 1.912 | 1.841 | 1.785 | 1.739 | 1.702 | 1.670 | 1.643 | 1.620 | 1.599 | 1.581 | 1.564 | 1.550 | 1.536 | 1.524 | 1.513 | 1.503 |
| 100 | 2.756 | 2.356 | 2.139 | 2.002 | 1.906 | 1.834 | 1.778 | 1.732 | 1.695 | 1.663 | 1.636 | 1.612 | 1.592 | 1.573 | 1.557 | 1.542 | 1.528 | 1.516 | 1.505 | 1.494 |
| 200 | 2.731 | 2.329 | 2.111 | 1.973 | 1.876 | 1.804 | 1.747 | 1.701 | 1.663 | 1.631 | 1.603 | 1.579 | 1.558 | 1.539 | 1.522 | 1.507 | 1.493 | 1.480 | 1.468 | 1.458 |
| 500 | 2.716 | 2.313 | 2.095 | 1.956 | 1.859 | 1.786 | 1.729 | 1.683 | 1.644 | 1.612 | 1.583 | 1.559 | 1.537 | 1.518 | 1.501 | 1.485 | 1.471 | 1.458 | 1.446 | 1.435 |
| 1000 | 2.711 | 2.308 | 2.089 | 1.950 | 1.853 | 1.780 | 1.723 | 1.676 | 1.638 | 1.605 | 1.577 | 1.552 | 1.531 | 1.511 | 1.494 | 1.478 | 1.464 | 1.451 | 1.439 | 1.428 |

Elaborada por Irene Patricia Valdez y Alfaro.

Tabla 5. VALORES F DE LA DISTRIBUCIÓN F DE FISHER

1 - α = 0.9

1 - α = P (F \leq f _{α ,v₁,v₂})

| $v_2 \backslash v_1$ | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | 200 | 500 | 1000 |
|----------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1 | 61.815 | 61.883 | 61.945 | 62.002 | 62.055 | 62.103 | 62.148 | 62.189 | 62.229 | 62.265 | 62.529 | 62.688 | 62.794 | 62.871 | 62.927 | 62.972 | 63.007 | 63.167 | 63.264 | 63.296 |
| 2 | 9.444 | 9.446 | 9.448 | 9.450 | 9.451 | 9.453 | 9.454 | 9.456 | 9.457 | 9.458 | 9.466 | 9.471 | 9.475 | 9.477 | 9.479 | 9.480 | 9.481 | 9.486 | 9.489 | 9.490 |
| 3 | 5.182 | 5.180 | 5.178 | 5.176 | 5.175 | 5.173 | 5.172 | 5.170 | 5.169 | 5.168 | 5.160 | 5.155 | 5.151 | 5.149 | 5.147 | 5.145 | 5.144 | 5.139 | 5.136 | 5.135 |
| 4 | 3.841 | 3.837 | 3.834 | 3.831 | 3.828 | 3.826 | 3.823 | 3.821 | 3.819 | 3.817 | 3.804 | 3.795 | 3.790 | 3.786 | 3.782 | 3.780 | 3.778 | 3.769 | 3.764 | 3.762 |
| 5 | 3.202 | 3.198 | 3.194 | 3.191 | 3.187 | 3.184 | 3.181 | 3.179 | 3.176 | 3.174 | 3.157 | 3.147 | 3.140 | 3.135 | 3.132 | 3.129 | 3.126 | 3.116 | 3.109 | 3.107 |
| 6 | 2.831 | 2.827 | 2.822 | 2.818 | 2.815 | 2.811 | 2.808 | 2.805 | 2.803 | 2.800 | 2.781 | 2.770 | 2.762 | 2.756 | 2.752 | 2.749 | 2.746 | 2.734 | 2.727 | 2.725 |
| 7 | 2.589 | 2.584 | 2.580 | 2.575 | 2.571 | 2.568 | 2.564 | 2.561 | 2.558 | 2.555 | 2.535 | 2.523 | 2.514 | 2.508 | 2.504 | 2.500 | 2.497 | 2.484 | 2.476 | 2.473 |
| 8 | 2.419 | 2.414 | 2.409 | 2.404 | 2.400 | 2.396 | 2.392 | 2.389 | 2.386 | 2.383 | 2.361 | 2.348 | 2.339 | 2.333 | 2.328 | 2.324 | 2.321 | 2.307 | 2.298 | 2.295 |
| 9 | 2.292 | 2.287 | 2.282 | 2.277 | 2.272 | 2.268 | 2.265 | 2.261 | 2.258 | 2.255 | 2.232 | 2.218 | 2.208 | 2.202 | 2.196 | 2.192 | 2.189 | 2.174 | 2.165 | 2.162 |
| 10 | 2.194 | 2.189 | 2.183 | 2.178 | 2.174 | 2.170 | 2.166 | 2.162 | 2.159 | 2.155 | 2.132 | 2.117 | 2.107 | 2.100 | 2.095 | 2.090 | 2.087 | 2.071 | 2.062 | 2.059 |
| 11 | 2.117 | 2.111 | 2.105 | 2.100 | 2.095 | 2.091 | 2.087 | 2.083 | 2.080 | 2.076 | 2.052 | 2.036 | 2.026 | 2.019 | 2.013 | 2.009 | 2.005 | 1.989 | 1.979 | 1.975 |
| 12 | 2.053 | 2.047 | 2.041 | 2.036 | 2.031 | 2.027 | 2.022 | 2.019 | 2.015 | 2.011 | 1.986 | 1.970 | 1.960 | 1.952 | 1.946 | 1.942 | 1.938 | 1.921 | 1.911 | 1.907 |
| 13 | 2.000 | 1.994 | 1.988 | 1.983 | 1.978 | 1.973 | 1.969 | 1.965 | 1.961 | 1.958 | 1.931 | 1.915 | 1.904 | 1.896 | 1.890 | 1.886 | 1.882 | 1.864 | 1.853 | 1.850 |
| 14 | 1.955 | 1.949 | 1.943 | 1.938 | 1.933 | 1.928 | 1.923 | 1.919 | 1.916 | 1.912 | 1.885 | 1.869 | 1.857 | 1.849 | 1.843 | 1.838 | 1.834 | 1.816 | 1.805 | 1.801 |
| 15 | 1.917 | 1.911 | 1.905 | 1.899 | 1.894 | 1.889 | 1.885 | 1.880 | 1.876 | 1.873 | 1.845 | 1.828 | 1.817 | 1.808 | 1.802 | 1.797 | 1.793 | 1.774 | 1.763 | 1.759 |
| 16 | 1.884 | 1.877 | 1.871 | 1.866 | 1.860 | 1.855 | 1.851 | 1.847 | 1.843 | 1.839 | 1.811 | 1.793 | 1.782 | 1.773 | 1.766 | 1.761 | 1.757 | 1.738 | 1.726 | 1.722 |
| 17 | 1.855 | 1.848 | 1.842 | 1.836 | 1.831 | 1.826 | 1.821 | 1.817 | 1.813 | 1.809 | 1.781 | 1.763 | 1.751 | 1.742 | 1.735 | 1.730 | 1.726 | 1.706 | 1.694 | 1.690 |
| 18 | 1.829 | 1.823 | 1.816 | 1.810 | 1.805 | 1.800 | 1.795 | 1.791 | 1.787 | 1.783 | 1.754 | 1.736 | 1.723 | 1.714 | 1.707 | 1.702 | 1.698 | 1.678 | 1.665 | 1.661 |
| 19 | 1.807 | 1.800 | 1.793 | 1.787 | 1.782 | 1.777 | 1.772 | 1.767 | 1.763 | 1.759 | 1.730 | 1.711 | 1.699 | 1.690 | 1.683 | 1.677 | 1.673 | 1.652 | 1.639 | 1.635 |
| 20 | 1.786 | 1.779 | 1.773 | 1.767 | 1.761 | 1.756 | 1.751 | 1.746 | 1.742 | 1.738 | 1.708 | 1.690 | 1.677 | 1.667 | 1.660 | 1.655 | 1.650 | 1.629 | 1.616 | 1.612 |
| 21 | 1.768 | 1.761 | 1.754 | 1.748 | 1.742 | 1.737 | 1.732 | 1.728 | 1.723 | 1.719 | 1.689 | 1.670 | 1.657 | 1.647 | 1.640 | 1.634 | 1.630 | 1.608 | 1.595 | 1.591 |
| 22 | 1.751 | 1.744 | 1.737 | 1.731 | 1.726 | 1.720 | 1.715 | 1.711 | 1.706 | 1.702 | 1.671 | 1.652 | 1.639 | 1.629 | 1.622 | 1.616 | 1.611 | 1.590 | 1.576 | 1.571 |
| 23 | 1.736 | 1.729 | 1.722 | 1.716 | 1.710 | 1.705 | 1.700 | 1.695 | 1.691 | 1.686 | 1.655 | 1.636 | 1.622 | 1.613 | 1.605 | 1.599 | 1.594 | 1.572 | 1.558 | 1.554 |
| 24 | 1.722 | 1.715 | 1.708 | 1.702 | 1.696 | 1.691 | 1.686 | 1.681 | 1.676 | 1.672 | 1.641 | 1.621 | 1.607 | 1.597 | 1.590 | 1.584 | 1.579 | 1.556 | 1.542 | 1.538 |
| 25 | 1.710 | 1.702 | 1.695 | 1.689 | 1.683 | 1.678 | 1.672 | 1.668 | 1.663 | 1.659 | 1.627 | 1.607 | 1.593 | 1.583 | 1.576 | 1.569 | 1.565 | 1.542 | 1.527 | 1.523 |
| 26 | 1.698 | 1.690 | 1.683 | 1.677 | 1.671 | 1.666 | 1.660 | 1.656 | 1.651 | 1.647 | 1.615 | 1.594 | 1.581 | 1.570 | 1.562 | 1.556 | 1.551 | 1.528 | 1.514 | 1.509 |
| 27 | 1.687 | 1.680 | 1.673 | 1.666 | 1.660 | 1.655 | 1.649 | 1.645 | 1.640 | 1.636 | 1.603 | 1.583 | 1.569 | 1.558 | 1.550 | 1.544 | 1.539 | 1.515 | 1.501 | 1.496 |
| 28 | 1.677 | 1.669 | 1.662 | 1.656 | 1.650 | 1.644 | 1.639 | 1.634 | 1.630 | 1.625 | 1.592 | 1.572 | 1.558 | 1.547 | 1.539 | 1.533 | 1.528 | 1.504 | 1.489 | 1.484 |
| 29 | 1.668 | 1.660 | 1.653 | 1.647 | 1.640 | 1.635 | 1.630 | 1.625 | 1.620 | 1.616 | 1.583 | 1.562 | 1.547 | 1.537 | 1.529 | 1.522 | 1.517 | 1.493 | 1.478 | 1.472 |
| 30 | 1.659 | 1.651 | 1.644 | 1.638 | 1.632 | 1.626 | 1.621 | 1.616 | 1.611 | 1.606 | 1.573 | 1.552 | 1.538 | 1.527 | 1.519 | 1.512 | 1.507 | 1.482 | 1.467 | 1.462 |
| 40 | 1.596 | 1.588 | 1.581 | 1.574 | 1.568 | 1.562 | 1.556 | 1.551 | 1.546 | 1.541 | 1.506 | 1.483 | 1.467 | 1.455 | 1.447 | 1.439 | 1.434 | 1.406 | 1.389 | 1.383 |
| 50 | 1.559 | 1.551 | 1.543 | 1.536 | 1.529 | 1.523 | 1.517 | 1.512 | 1.507 | 1.502 | 1.465 | 1.441 | 1.424 | 1.412 | 1.402 | 1.395 | 1.388 | 1.359 | 1.340 | 1.333 |
| 60 | 1.534 | 1.526 | 1.518 | 1.511 | 1.504 | 1.498 | 1.492 | 1.486 | 1.481 | 1.476 | 1.437 | 1.413 | 1.395 | 1.382 | 1.372 | 1.364 | 1.358 | 1.326 | 1.306 | 1.299 |
| 70 | 1.517 | 1.508 | 1.500 | 1.493 | 1.486 | 1.479 | 1.473 | 1.467 | 1.462 | 1.457 | 1.418 | 1.392 | 1.374 | 1.361 | 1.350 | 1.342 | 1.335 | 1.302 | 1.281 | 1.273 |
| 80 | 1.503 | 1.495 | 1.487 | 1.479 | 1.472 | 1.465 | 1.459 | 1.453 | 1.448 | 1.443 | 1.403 | 1.377 | 1.358 | 1.344 | 1.334 | 1.325 | 1.318 | 1.284 | 1.261 | 1.253 |
| 90 | 1.493 | 1.484 | 1.476 | 1.468 | 1.461 | 1.455 | 1.448 | 1.442 | 1.437 | 1.432 | 1.391 | 1.365 | 1.346 | 1.332 | 1.321 | 1.312 | 1.304 | 1.269 | 1.245 | 1.237 |
| 100 | 1.485 | 1.476 | 1.468 | 1.460 | 1.453 | 1.446 | 1.440 | 1.434 | 1.428 | 1.423 | 1.382 | 1.355 | 1.336 | 1.321 | 1.310 | 1.301 | 1.293 | 1.257 | 1.232 | 1.223 |
| 200 | 1.448 | 1.438 | 1.430 | 1.422 | 1.414 | 1.407 | 1.400 | 1.394 | 1.388 | 1.383 | 1.339 | 1.310 | 1.289 | 1.273 | 1.261 | 1.250 | 1.242 | 1.199 | 1.168 | 1.157 |
| 500 | 1.425 | 1.416 | 1.407 | 1.399 | 1.391 | 1.384 | 1.377 | 1.370 | 1.364 | 1.358 | 1.313 | 1.282 | 1.260 | 1.243 | 1.229 | 1.218 | 1.209 | 1.160 | 1.122 | 1.106 |
| 1000 | 1.418 | 1.408 | 1.399 | 1.391 | 1.383 | 1.376 | 1.369 | 1.362 | 1.356 | 1.350 | 1.304 | 1.273 | 1.250 | 1.232 | 1.218 | 1.207 | 1.197 | 1.145 | 1.103 | 1.084 |

Elaborada por Irene Patricia Valdez y Alfaro.

Tabla 5. VALORES F DE LA DISTRIBUCIÓN F DE FISHER

1 - $\alpha = 0.95$

v_1 = grados de libertad del numerador

1 - $\alpha = P (F \leq f_{\alpha, v_1, v_2})$

v_2 = grados de libertad del denominador

| $v_2 \backslash v_1$ | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|----------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1 | 161.446 | 199.499 | 215.707 | 224.583 | 230.160 | 233.988 | 236.767 | 238.884 | 240.543 | 241.882 | 242.981 | 243.905 | 244.690 | 245.363 | 245.949 | 246.466 | 246.917 | 247.324 | 247.688 | 248.016 |
| 2 | 18.513 | 19.000 | 19.164 | 19.247 | 19.296 | 19.329 | 19.353 | 19.371 | 19.385 | 19.396 | 19.405 | 19.412 | 19.419 | 19.424 | 19.429 | 19.433 | 19.437 | 19.440 | 19.443 | 19.446 |
| 3 | 10.128 | 9.552 | 9.277 | 9.117 | 9.013 | 8.941 | 8.887 | 8.845 | 8.812 | 8.785 | 8.763 | 8.745 | 8.729 | 8.715 | 8.703 | 8.692 | 8.683 | 8.675 | 8.667 | 8.660 |
| 4 | 7.709 | 6.944 | 6.591 | 6.388 | 6.256 | 6.163 | 6.094 | 6.041 | 5.999 | 5.964 | 5.936 | 5.912 | 5.891 | 5.873 | 5.858 | 5.844 | 5.832 | 5.821 | 5.811 | 5.803 |
| 5 | 6.608 | 5.786 | 5.409 | 5.192 | 5.050 | 4.950 | 4.876 | 4.818 | 4.772 | 4.735 | 4.704 | 4.678 | 4.655 | 4.636 | 4.619 | 4.604 | 4.590 | 4.579 | 4.568 | 4.558 |
| 6 | 5.987 | 5.143 | 4.757 | 4.534 | 4.387 | 4.284 | 4.207 | 4.147 | 4.099 | 4.060 | 4.027 | 4.000 | 3.976 | 3.956 | 3.938 | 3.922 | 3.908 | 3.896 | 3.884 | 3.874 |
| 7 | 5.591 | 4.737 | 4.347 | 4.120 | 3.972 | 3.866 | 3.787 | 3.726 | 3.677 | 3.637 | 3.603 | 3.575 | 3.550 | 3.529 | 3.511 | 3.494 | 3.480 | 3.467 | 3.455 | 3.445 |
| 8 | 5.318 | 4.459 | 4.066 | 3.838 | 3.688 | 3.581 | 3.500 | 3.438 | 3.388 | 3.347 | 3.313 | 3.284 | 3.259 | 3.237 | 3.218 | 3.202 | 3.187 | 3.173 | 3.161 | 3.150 |
| 9 | 5.117 | 4.256 | 3.863 | 3.633 | 3.482 | 3.374 | 3.293 | 3.230 | 3.179 | 3.137 | 3.102 | 3.073 | 3.048 | 3.025 | 3.006 | 2.989 | 2.974 | 2.960 | 2.948 | 2.936 |
| 10 | 4.965 | 4.103 | 3.708 | 3.478 | 3.326 | 3.217 | 3.135 | 3.072 | 3.020 | 2.978 | 2.943 | 2.913 | 2.887 | 2.865 | 2.845 | 2.828 | 2.812 | 2.798 | 2.785 | 2.774 |
| 11 | 4.844 | 3.982 | 3.587 | 3.357 | 3.204 | 3.095 | 3.012 | 2.948 | 2.896 | 2.854 | 2.818 | 2.788 | 2.761 | 2.739 | 2.719 | 2.701 | 2.685 | 2.671 | 2.658 | 2.646 |
| 12 | 4.747 | 3.885 | 3.490 | 3.259 | 3.106 | 2.996 | 2.913 | 2.849 | 2.796 | 2.753 | 2.717 | 2.687 | 2.660 | 2.637 | 2.617 | 2.599 | 2.583 | 2.568 | 2.555 | 2.544 |
| 13 | 4.667 | 3.806 | 3.411 | 3.179 | 3.025 | 2.915 | 2.832 | 2.767 | 2.714 | 2.671 | 2.635 | 2.604 | 2.577 | 2.554 | 2.533 | 2.515 | 2.499 | 2.484 | 2.471 | 2.459 |
| 14 | 4.600 | 3.739 | 3.344 | 3.112 | 2.958 | 2.848 | 2.764 | 2.699 | 2.646 | 2.602 | 2.565 | 2.534 | 2.507 | 2.484 | 2.463 | 2.445 | 2.428 | 2.413 | 2.400 | 2.388 |
| 15 | 4.543 | 3.682 | 3.287 | 3.056 | 2.901 | 2.790 | 2.707 | 2.641 | 2.588 | 2.544 | 2.507 | 2.475 | 2.448 | 2.424 | 2.403 | 2.385 | 2.368 | 2.353 | 2.340 | 2.328 |
| 16 | 4.494 | 3.634 | 3.239 | 3.007 | 2.852 | 2.741 | 2.657 | 2.591 | 2.538 | 2.494 | 2.456 | 2.425 | 2.397 | 2.373 | 2.352 | 2.333 | 2.317 | 2.302 | 2.288 | 2.276 |
| 17 | 4.451 | 3.592 | 3.197 | 2.965 | 2.810 | 2.699 | 2.614 | 2.548 | 2.494 | 2.450 | 2.413 | 2.381 | 2.353 | 2.329 | 2.308 | 2.289 | 2.272 | 2.257 | 2.243 | 2.230 |
| 18 | 4.414 | 3.555 | 3.160 | 2.928 | 2.773 | 2.661 | 2.577 | 2.510 | 2.456 | 2.412 | 2.374 | 2.342 | 2.314 | 2.290 | 2.269 | 2.250 | 2.233 | 2.217 | 2.203 | 2.191 |
| 19 | 4.381 | 3.522 | 3.127 | 2.895 | 2.740 | 2.628 | 2.544 | 2.477 | 2.423 | 2.378 | 2.340 | 2.308 | 2.280 | 2.256 | 2.234 | 2.215 | 2.198 | 2.182 | 2.168 | 2.155 |
| 20 | 4.351 | 3.493 | 3.098 | 2.866 | 2.711 | 2.599 | 2.514 | 2.447 | 2.393 | 2.348 | 2.310 | 2.278 | 2.250 | 2.225 | 2.203 | 2.184 | 2.167 | 2.151 | 2.137 | 2.124 |
| 21 | 4.325 | 3.467 | 3.072 | 2.840 | 2.685 | 2.573 | 2.488 | 2.420 | 2.366 | 2.321 | 2.283 | 2.250 | 2.222 | 2.197 | 2.176 | 2.156 | 2.139 | 2.123 | 2.109 | 2.096 |
| 22 | 4.301 | 3.443 | 3.049 | 2.817 | 2.661 | 2.549 | 2.464 | 2.397 | 2.342 | 2.297 | 2.259 | 2.226 | 2.198 | 2.173 | 2.151 | 2.131 | 2.114 | 2.098 | 2.084 | 2.071 |
| 23 | 4.279 | 3.422 | 3.028 | 2.796 | 2.640 | 2.528 | 2.442 | 2.375 | 2.320 | 2.275 | 2.236 | 2.204 | 2.175 | 2.150 | 2.128 | 2.109 | 2.091 | 2.075 | 2.061 | 2.048 |
| 24 | 4.260 | 3.403 | 3.009 | 2.776 | 2.621 | 2.508 | 2.423 | 2.355 | 2.300 | 2.255 | 2.216 | 2.183 | 2.155 | 2.130 | 2.108 | 2.088 | 2.070 | 2.054 | 2.040 | 2.027 |
| 25 | 4.242 | 3.385 | 2.991 | 2.759 | 2.603 | 2.490 | 2.405 | 2.337 | 2.282 | 2.236 | 2.198 | 2.165 | 2.136 | 2.111 | 2.089 | 2.069 | 2.051 | 2.035 | 2.021 | 2.007 |
| 26 | 4.225 | 3.369 | 2.975 | 2.743 | 2.587 | 2.474 | 2.388 | 2.321 | 2.265 | 2.220 | 2.181 | 2.148 | 2.119 | 2.094 | 2.072 | 2.052 | 2.034 | 2.018 | 2.003 | 1.990 |
| 27 | 4.210 | 3.354 | 2.960 | 2.728 | 2.572 | 2.459 | 2.373 | 2.305 | 2.250 | 2.204 | 2.166 | 2.132 | 2.103 | 2.078 | 2.056 | 2.036 | 2.018 | 2.002 | 1.987 | 1.974 |
| 28 | 4.196 | 3.340 | 2.947 | 2.714 | 2.558 | 2.445 | 2.359 | 2.291 | 2.236 | 2.190 | 2.151 | 2.118 | 2.089 | 2.064 | 2.041 | 2.021 | 2.003 | 1.987 | 1.972 | 1.959 |
| 29 | 4.183 | 3.328 | 2.934 | 2.701 | 2.545 | 2.432 | 2.346 | 2.278 | 2.223 | 2.177 | 2.138 | 2.104 | 2.075 | 2.050 | 2.027 | 2.007 | 1.989 | 1.973 | 1.958 | 1.945 |
| 30 | 4.171 | 3.316 | 2.922 | 2.690 | 2.534 | 2.421 | 2.334 | 2.266 | 2.211 | 2.165 | 2.126 | 2.092 | 2.063 | 2.037 | 2.015 | 1.995 | 1.976 | 1.960 | 1.945 | 1.932 |
| 40 | 4.085 | 3.232 | 2.839 | 2.606 | 2.449 | 2.336 | 2.249 | 2.180 | 2.124 | 2.077 | 2.038 | 2.003 | 1.974 | 1.948 | 1.924 | 1.904 | 1.885 | 1.868 | 1.853 | 1.839 |
| 50 | 4.034 | 3.183 | 2.790 | 2.557 | 2.400 | 2.286 | 2.199 | 2.130 | 2.073 | 2.026 | 1.986 | 1.952 | 1.921 | 1.895 | 1.871 | 1.850 | 1.831 | 1.814 | 1.798 | 1.784 |
| 60 | 4.001 | 3.150 | 2.758 | 2.525 | 2.368 | 2.254 | 2.167 | 2.097 | 2.040 | 1.993 | 1.952 | 1.917 | 1.887 | 1.860 | 1.836 | 1.815 | 1.796 | 1.778 | 1.763 | 1.748 |
| 70 | 3.978 | 3.128 | 2.736 | 2.503 | 2.346 | 2.231 | 2.143 | 2.074 | 2.017 | 1.969 | 1.928 | 1.893 | 1.863 | 1.836 | 1.812 | 1.790 | 1.771 | 1.753 | 1.737 | 1.722 |
| 80 | 3.960 | 3.111 | 2.719 | 2.486 | 2.329 | 2.214 | 2.126 | 2.056 | 1.999 | 1.951 | 1.910 | 1.875 | 1.845 | 1.817 | 1.793 | 1.772 | 1.752 | 1.734 | 1.718 | 1.703 |
| 90 | 3.947 | 3.098 | 2.706 | 2.473 | 2.316 | 2.201 | 2.113 | 2.043 | 1.986 | 1.938 | 1.897 | 1.861 | 1.830 | 1.803 | 1.779 | 1.757 | 1.737 | 1.720 | 1.703 | 1.688 |
| 100 | 3.936 | 3.087 | 2.696 | 2.463 | 2.305 | 2.191 | 2.103 | 2.032 | 1.975 | 1.927 | 1.886 | 1.850 | 1.819 | 1.792 | 1.768 | 1.746 | 1.726 | 1.708 | 1.691 | 1.676 |
| 200 | 3.888 | 3.041 | 2.650 | 2.417 | 2.259 | 2.144 | 2.056 | 1.985 | 1.927 | 1.878 | 1.837 | 1.801 | 1.769 | 1.742 | 1.717 | 1.694 | 1.674 | 1.656 | 1.639 | 1.623 |
| 500 | 3.860 | 3.014 | 2.623 | 2.390 | 2.232 | 2.117 | 2.028 | 1.957 | 1.899 | 1.850 | 1.808 | 1.772 | 1.740 | 1.712 | 1.686 | 1.664 | 1.643 | 1.625 | 1.607 | 1.592 |
| 1000 | 3.851 | 3.005 | 2.614 | 2.381 | 2.223 | 2.108 | 2.019 | 1.948 | 1.889 | 1.840 | 1.798 | 1.762 | 1.730 | 1.702 | 1.676 | 1.654 | 1.633 | 1.614 | 1.597 | 1.581 |

Elaborada por Irene Patricia Valdez y Alfaro.

Tabla 5. VALORES F DE LA DISTRIBUCIÓN F DE FISHER

1 - α = 0.95

1 - α = P (F \leq f _{α ,v1,v2)}

| $v_2 \backslash v_1$ | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | 200 | 500 | 1000 |
|----------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1 | 248.307 | 248.579 | 248.823 | 249.052 | 249.260 | 249.453 | 249.631 | 249.798 | 249.951 | 250.096 | 251.144 | 251.774 | 252.196 | 252.498 | 252.723 | 252.898 | 253.043 | 253.676 | 254.062 | 254.186 |
| 2 | 19.448 | 19.450 | 19.452 | 19.454 | 19.456 | 19.457 | 19.459 | 19.460 | 19.461 | 19.463 | 19.471 | 19.476 | 19.479 | 19.481 | 19.483 | 19.485 | 19.486 | 19.491 | 19.494 | 19.495 |
| 3 | 8.654 | 8.648 | 8.643 | 8.638 | 8.634 | 8.630 | 8.626 | 8.623 | 8.620 | 8.617 | 8.594 | 8.581 | 8.572 | 8.566 | 8.561 | 8.557 | 8.554 | 8.540 | 8.532 | 8.529 |
| 4 | 5.795 | 5.787 | 5.781 | 5.774 | 5.769 | 5.763 | 5.759 | 5.754 | 5.750 | 5.746 | 5.717 | 5.699 | 5.688 | 5.679 | 5.673 | 5.668 | 5.664 | 5.646 | 5.635 | 5.632 |
| 5 | 4.549 | 4.541 | 4.534 | 4.527 | 4.521 | 4.515 | 4.510 | 4.505 | 4.500 | 4.496 | 4.464 | 4.444 | 4.431 | 4.422 | 4.415 | 4.409 | 4.405 | 4.385 | 4.373 | 4.369 |
| 6 | 3.865 | 3.856 | 3.849 | 3.841 | 3.835 | 3.829 | 3.823 | 3.818 | 3.813 | 3.808 | 3.774 | 3.754 | 3.740 | 3.730 | 3.722 | 3.716 | 3.712 | 3.690 | 3.678 | 3.673 |
| 7 | 3.435 | 3.426 | 3.418 | 3.410 | 3.404 | 3.397 | 3.391 | 3.386 | 3.381 | 3.376 | 3.340 | 3.319 | 3.304 | 3.294 | 3.286 | 3.280 | 3.275 | 3.252 | 3.239 | 3.234 |
| 8 | 3.140 | 3.131 | 3.123 | 3.115 | 3.108 | 3.102 | 3.095 | 3.090 | 3.084 | 3.079 | 3.043 | 3.020 | 3.005 | 2.994 | 2.986 | 2.980 | 2.975 | 2.951 | 2.937 | 2.932 |
| 9 | 2.926 | 2.917 | 2.908 | 2.900 | 2.893 | 2.886 | 2.880 | 2.874 | 2.869 | 2.864 | 2.826 | 2.803 | 2.787 | 2.776 | 2.768 | 2.761 | 2.756 | 2.731 | 2.717 | 2.712 |
| 10 | 2.764 | 2.754 | 2.745 | 2.737 | 2.730 | 2.723 | 2.716 | 2.710 | 2.705 | 2.700 | 2.661 | 2.637 | 2.621 | 2.609 | 2.601 | 2.594 | 2.588 | 2.563 | 2.548 | 2.543 |
| 11 | 2.636 | 2.626 | 2.617 | 2.609 | 2.601 | 2.594 | 2.588 | 2.582 | 2.576 | 2.570 | 2.531 | 2.507 | 2.490 | 2.478 | 2.469 | 2.462 | 2.457 | 2.431 | 2.415 | 2.410 |
| 12 | 2.533 | 2.523 | 2.514 | 2.505 | 2.498 | 2.491 | 2.484 | 2.478 | 2.472 | 2.466 | 2.426 | 2.401 | 2.384 | 2.372 | 2.363 | 2.356 | 2.350 | 2.323 | 2.307 | 2.302 |
| 13 | 2.448 | 2.438 | 2.429 | 2.420 | 2.412 | 2.405 | 2.398 | 2.392 | 2.386 | 2.380 | 2.339 | 2.314 | 2.297 | 2.284 | 2.275 | 2.267 | 2.261 | 2.234 | 2.218 | 2.212 |
| 14 | 2.377 | 2.367 | 2.357 | 2.349 | 2.341 | 2.333 | 2.326 | 2.320 | 2.314 | 2.308 | 2.266 | 2.241 | 2.223 | 2.210 | 2.201 | 2.193 | 2.187 | 2.159 | 2.142 | 2.136 |
| 15 | 2.316 | 2.306 | 2.297 | 2.288 | 2.280 | 2.272 | 2.265 | 2.259 | 2.253 | 2.247 | 2.204 | 2.178 | 2.160 | 2.147 | 2.137 | 2.130 | 2.123 | 2.095 | 2.078 | 2.072 |
| 16 | 2.264 | 2.254 | 2.244 | 2.235 | 2.227 | 2.220 | 2.212 | 2.206 | 2.200 | 2.194 | 2.151 | 2.124 | 2.106 | 2.093 | 2.083 | 2.075 | 2.068 | 2.039 | 2.022 | 2.016 |
| 17 | 2.219 | 2.208 | 2.199 | 2.190 | 2.181 | 2.174 | 2.167 | 2.160 | 2.154 | 2.148 | 2.104 | 2.077 | 2.058 | 2.045 | 2.035 | 2.027 | 2.020 | 1.991 | 1.973 | 1.967 |
| 18 | 2.179 | 2.168 | 2.159 | 2.150 | 2.141 | 2.134 | 2.126 | 2.119 | 2.113 | 2.107 | 2.063 | 2.035 | 2.017 | 2.003 | 1.993 | 1.985 | 1.978 | 1.948 | 1.929 | 1.923 |
| 19 | 2.144 | 2.133 | 2.123 | 2.114 | 2.106 | 2.098 | 2.090 | 2.084 | 2.077 | 2.071 | 2.026 | 1.999 | 1.980 | 1.966 | 1.955 | 1.947 | 1.940 | 1.910 | 1.891 | 1.884 |
| 20 | 2.112 | 2.102 | 2.092 | 2.082 | 2.074 | 2.066 | 2.059 | 2.052 | 2.045 | 2.039 | 1.994 | 1.966 | 1.946 | 1.932 | 1.922 | 1.913 | 1.907 | 1.875 | 1.856 | 1.850 |
| 21 | 2.084 | 2.073 | 2.063 | 2.054 | 2.045 | 2.037 | 2.030 | 2.023 | 2.016 | 2.010 | 1.965 | 1.936 | 1.916 | 1.902 | 1.891 | 1.883 | 1.876 | 1.845 | 1.825 | 1.818 |
| 22 | 2.059 | 2.048 | 2.038 | 2.028 | 2.020 | 2.012 | 2.004 | 1.997 | 1.990 | 1.984 | 1.938 | 1.909 | 1.889 | 1.875 | 1.864 | 1.856 | 1.849 | 1.817 | 1.797 | 1.790 |
| 23 | 2.036 | 2.025 | 2.014 | 2.005 | 1.996 | 1.988 | 1.981 | 1.973 | 1.967 | 1.961 | 1.914 | 1.885 | 1.865 | 1.850 | 1.839 | 1.830 | 1.823 | 1.791 | 1.771 | 1.764 |
| 24 | 2.015 | 2.003 | 1.993 | 1.984 | 1.975 | 1.967 | 1.959 | 1.952 | 1.945 | 1.939 | 1.892 | 1.863 | 1.842 | 1.828 | 1.816 | 1.808 | 1.800 | 1.768 | 1.747 | 1.740 |
| 25 | 1.995 | 1.984 | 1.974 | 1.964 | 1.955 | 1.947 | 1.939 | 1.932 | 1.926 | 1.919 | 1.872 | 1.842 | 1.822 | 1.807 | 1.796 | 1.787 | 1.779 | 1.746 | 1.725 | 1.718 |
| 26 | 1.978 | 1.966 | 1.956 | 1.946 | 1.938 | 1.929 | 1.921 | 1.914 | 1.907 | 1.901 | 1.853 | 1.823 | 1.803 | 1.788 | 1.776 | 1.767 | 1.760 | 1.726 | 1.705 | 1.698 |
| 27 | 1.961 | 1.950 | 1.940 | 1.930 | 1.921 | 1.913 | 1.905 | 1.898 | 1.891 | 1.884 | 1.836 | 1.806 | 1.785 | 1.770 | 1.758 | 1.749 | 1.742 | 1.708 | 1.686 | 1.679 |
| 28 | 1.946 | 1.935 | 1.924 | 1.915 | 1.906 | 1.897 | 1.889 | 1.882 | 1.875 | 1.869 | 1.820 | 1.790 | 1.769 | 1.754 | 1.742 | 1.733 | 1.725 | 1.691 | 1.669 | 1.662 |
| 29 | 1.932 | 1.921 | 1.910 | 1.901 | 1.891 | 1.883 | 1.875 | 1.868 | 1.861 | 1.854 | 1.806 | 1.775 | 1.754 | 1.738 | 1.726 | 1.717 | 1.710 | 1.675 | 1.653 | 1.645 |
| 30 | 1.919 | 1.908 | 1.897 | 1.887 | 1.878 | 1.870 | 1.862 | 1.854 | 1.847 | 1.841 | 1.792 | 1.761 | 1.740 | 1.724 | 1.712 | 1.703 | 1.695 | 1.660 | 1.637 | 1.630 |
| 40 | 1.826 | 1.814 | 1.803 | 1.793 | 1.783 | 1.775 | 1.766 | 1.759 | 1.751 | 1.744 | 1.693 | 1.660 | 1.637 | 1.621 | 1.608 | 1.597 | 1.589 | 1.551 | 1.526 | 1.517 |
| 50 | 1.771 | 1.759 | 1.748 | 1.737 | 1.727 | 1.718 | 1.710 | 1.702 | 1.694 | 1.687 | 1.634 | 1.599 | 1.576 | 1.558 | 1.544 | 1.534 | 1.525 | 1.484 | 1.457 | 1.448 |
| 60 | 1.735 | 1.722 | 1.711 | 1.700 | 1.690 | 1.681 | 1.672 | 1.664 | 1.656 | 1.649 | 1.594 | 1.559 | 1.534 | 1.516 | 1.502 | 1.491 | 1.481 | 1.438 | 1.409 | 1.399 |
| 70 | 1.709 | 1.696 | 1.685 | 1.674 | 1.664 | 1.654 | 1.646 | 1.637 | 1.629 | 1.622 | 1.566 | 1.530 | 1.505 | 1.486 | 1.471 | 1.459 | 1.450 | 1.404 | 1.374 | 1.364 |
| 80 | 1.689 | 1.677 | 1.665 | 1.654 | 1.644 | 1.634 | 1.626 | 1.617 | 1.609 | 1.602 | 1.545 | 1.508 | 1.482 | 1.463 | 1.448 | 1.436 | 1.426 | 1.379 | 1.347 | 1.336 |
| 90 | 1.675 | 1.662 | 1.650 | 1.639 | 1.629 | 1.619 | 1.610 | 1.601 | 1.593 | 1.586 | 1.528 | 1.491 | 1.465 | 1.445 | 1.429 | 1.417 | 1.407 | 1.358 | 1.326 | 1.314 |
| 100 | 1.663 | 1.650 | 1.638 | 1.627 | 1.616 | 1.607 | 1.598 | 1.589 | 1.581 | 1.573 | 1.515 | 1.477 | 1.450 | 1.430 | 1.415 | 1.402 | 1.392 | 1.342 | 1.308 | 1.296 |
| 200 | 1.609 | 1.596 | 1.583 | 1.572 | 1.561 | 1.551 | 1.542 | 1.533 | 1.524 | 1.516 | 1.455 | 1.415 | 1.386 | 1.364 | 1.346 | 1.332 | 1.321 | 1.263 | 1.221 | 1.205 |
| 500 | 1.577 | 1.563 | 1.551 | 1.539 | 1.528 | 1.518 | 1.508 | 1.499 | 1.490 | 1.482 | 1.419 | 1.376 | 1.345 | 1.322 | 1.303 | 1.288 | 1.275 | 1.210 | 1.159 | 1.138 |
| 1000 | 1.566 | 1.553 | 1.540 | 1.528 | 1.517 | 1.507 | 1.497 | 1.488 | 1.479 | 1.471 | 1.406 | 1.363 | 1.332 | 1.308 | 1.289 | 1.273 | 1.260 | 1.190 | 1.134 | 1.110 |

Elaborada por Irene Patricia Valdez y Alfaro.

Tabla 5. VALORES F DE LA DISTRIBUCIÓN F DE FISHER

1 - $\alpha = 0.975$

v_1 = grados de libertad del numerador

1 - $\alpha = P (F \leq f_{\alpha, v_1, v_2})$

v_2 = grados de libertad del denominador

| $v_2 \backslash v_1$ | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|----------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1 | 647.793 | 799.482 | 864.151 | 899.599 | 921.835 | 937.114 | 948.203 | 956.643 | 963.279 | 968.634 | 973.028 | 976.725 | 979.839 | 982.545 | 984.874 | 986.911 | 988.715 | 990.345 | 991.800 | 993.081 |
| 2 | 38.506 | 39.000 | 39.166 | 39.248 | 39.298 | 39.331 | 39.356 | 39.373 | 39.387 | 39.398 | 39.407 | 39.415 | 39.421 | 39.427 | 39.431 | 39.436 | 39.439 | 39.442 | 39.446 | 39.448 |
| 3 | 17.443 | 16.044 | 15.439 | 15.101 | 14.885 | 14.735 | 14.624 | 14.540 | 14.473 | 14.419 | 14.374 | 14.337 | 14.305 | 14.277 | 14.253 | 14.232 | 14.213 | 14.196 | 14.181 | 14.167 |
| 4 | 12.218 | 10.649 | 9.979 | 9.604 | 9.364 | 9.197 | 9.074 | 8.980 | 8.905 | 8.844 | 8.794 | 8.751 | 8.715 | 8.684 | 8.657 | 8.633 | 8.611 | 8.592 | 8.575 | 8.560 |
| 5 | 10.007 | 8.434 | 7.764 | 7.388 | 7.146 | 6.978 | 6.853 | 6.757 | 6.681 | 6.619 | 6.568 | 6.525 | 6.488 | 6.456 | 6.428 | 6.403 | 6.381 | 6.362 | 6.344 | 6.329 |
| 6 | 8.813 | 7.260 | 6.599 | 6.227 | 5.988 | 5.820 | 5.695 | 5.600 | 5.523 | 5.461 | 5.410 | 5.366 | 5.329 | 5.297 | 5.269 | 5.244 | 5.222 | 5.202 | 5.184 | 5.168 |
| 7 | 8.073 | 6.542 | 5.890 | 5.523 | 5.285 | 5.119 | 4.995 | 4.899 | 4.823 | 4.761 | 4.709 | 4.666 | 4.628 | 4.596 | 4.568 | 4.543 | 4.521 | 4.501 | 4.483 | 4.467 |
| 8 | 7.571 | 6.059 | 5.416 | 5.053 | 4.817 | 4.652 | 4.529 | 4.433 | 4.357 | 4.295 | 4.243 | 4.200 | 4.162 | 4.130 | 4.101 | 4.076 | 4.054 | 4.034 | 4.016 | 3.999 |
| 9 | 7.209 | 5.715 | 5.078 | 4.718 | 4.484 | 4.320 | 4.197 | 4.102 | 4.026 | 3.964 | 3.912 | 3.868 | 3.831 | 3.798 | 3.769 | 3.744 | 3.722 | 3.701 | 3.683 | 3.667 |
| 10 | 6.937 | 5.456 | 4.826 | 4.468 | 4.236 | 4.072 | 3.950 | 3.855 | 3.779 | 3.717 | 3.665 | 3.621 | 3.583 | 3.550 | 3.522 | 3.496 | 3.474 | 3.453 | 3.435 | 3.419 |
| 11 | 6.724 | 5.256 | 4.630 | 4.275 | 4.044 | 3.881 | 3.759 | 3.664 | 3.588 | 3.526 | 3.474 | 3.430 | 3.392 | 3.359 | 3.330 | 3.304 | 3.282 | 3.261 | 3.243 | 3.226 |
| 12 | 6.554 | 5.096 | 4.474 | 4.121 | 3.891 | 3.728 | 3.607 | 3.512 | 3.436 | 3.374 | 3.321 | 3.277 | 3.239 | 3.206 | 3.177 | 3.152 | 3.129 | 3.108 | 3.090 | 3.073 |
| 13 | 6.414 | 4.965 | 4.347 | 3.996 | 3.767 | 3.604 | 3.483 | 3.388 | 3.312 | 3.250 | 3.197 | 3.153 | 3.115 | 3.082 | 3.053 | 3.027 | 3.004 | 2.983 | 2.965 | 2.948 |
| 14 | 6.298 | 4.857 | 4.242 | 3.892 | 3.663 | 3.501 | 3.380 | 3.285 | 3.209 | 3.147 | 3.095 | 3.050 | 3.012 | 2.979 | 2.949 | 2.923 | 2.900 | 2.879 | 2.861 | 2.844 |
| 15 | 6.200 | 4.765 | 4.153 | 3.804 | 3.576 | 3.415 | 3.293 | 3.199 | 3.123 | 3.060 | 3.008 | 2.963 | 2.925 | 2.891 | 2.862 | 2.836 | 2.813 | 2.792 | 2.773 | 2.756 |
| 16 | 6.115 | 4.687 | 4.077 | 3.729 | 3.502 | 3.341 | 3.219 | 3.125 | 3.049 | 2.986 | 2.934 | 2.889 | 2.851 | 2.817 | 2.788 | 2.761 | 2.738 | 2.717 | 2.698 | 2.681 |
| 17 | 6.042 | 4.619 | 4.011 | 3.665 | 3.438 | 3.277 | 3.156 | 3.061 | 2.985 | 2.922 | 2.870 | 2.825 | 2.786 | 2.753 | 2.723 | 2.697 | 2.673 | 2.652 | 2.633 | 2.616 |
| 18 | 5.978 | 4.560 | 3.954 | 3.608 | 3.382 | 3.221 | 3.100 | 3.005 | 2.929 | 2.866 | 2.814 | 2.769 | 2.730 | 2.696 | 2.667 | 2.640 | 2.617 | 2.596 | 2.576 | 2.559 |
| 19 | 5.922 | 4.508 | 3.903 | 3.559 | 3.333 | 3.172 | 3.051 | 2.956 | 2.880 | 2.817 | 2.765 | 2.720 | 2.681 | 2.647 | 2.617 | 2.591 | 2.567 | 2.546 | 2.526 | 2.509 |
| 20 | 5.871 | 4.461 | 3.859 | 3.515 | 3.289 | 3.128 | 3.007 | 2.913 | 2.837 | 2.774 | 2.721 | 2.676 | 2.637 | 2.603 | 2.573 | 2.547 | 2.523 | 2.501 | 2.482 | 2.464 |
| 21 | 5.827 | 4.420 | 3.819 | 3.475 | 3.250 | 3.090 | 2.969 | 2.874 | 2.798 | 2.735 | 2.682 | 2.637 | 2.598 | 2.564 | 2.534 | 2.507 | 2.483 | 2.462 | 2.442 | 2.425 |
| 22 | 5.786 | 4.383 | 3.783 | 3.440 | 3.215 | 3.055 | 2.934 | 2.839 | 2.763 | 2.700 | 2.647 | 2.602 | 2.563 | 2.528 | 2.498 | 2.472 | 2.448 | 2.426 | 2.407 | 2.389 |
| 23 | 5.750 | 4.349 | 3.750 | 3.408 | 3.183 | 3.023 | 2.902 | 2.808 | 2.731 | 2.668 | 2.615 | 2.570 | 2.531 | 2.497 | 2.466 | 2.440 | 2.416 | 2.394 | 2.374 | 2.357 |
| 24 | 5.717 | 4.319 | 3.721 | 3.379 | 3.155 | 2.995 | 2.874 | 2.779 | 2.703 | 2.640 | 2.586 | 2.541 | 2.502 | 2.468 | 2.437 | 2.411 | 2.386 | 2.365 | 2.345 | 2.327 |
| 25 | 5.686 | 4.291 | 3.694 | 3.353 | 3.129 | 2.969 | 2.848 | 2.753 | 2.677 | 2.613 | 2.560 | 2.515 | 2.476 | 2.441 | 2.411 | 2.384 | 2.360 | 2.338 | 2.318 | 2.300 |
| 26 | 5.659 | 4.265 | 3.670 | 3.329 | 3.105 | 2.945 | 2.824 | 2.729 | 2.653 | 2.590 | 2.536 | 2.491 | 2.452 | 2.417 | 2.387 | 2.360 | 2.335 | 2.314 | 2.294 | 2.276 |
| 27 | 5.633 | 4.242 | 3.647 | 3.307 | 3.083 | 2.923 | 2.802 | 2.707 | 2.631 | 2.568 | 2.514 | 2.469 | 2.429 | 2.395 | 2.364 | 2.337 | 2.313 | 2.291 | 2.271 | 2.253 |
| 28 | 5.610 | 4.221 | 3.626 | 3.286 | 3.063 | 2.903 | 2.782 | 2.687 | 2.611 | 2.547 | 2.494 | 2.448 | 2.409 | 2.374 | 2.344 | 2.317 | 2.292 | 2.270 | 2.251 | 2.232 |
| 29 | 5.588 | 4.201 | 3.607 | 3.267 | 3.044 | 2.884 | 2.763 | 2.669 | 2.592 | 2.529 | 2.475 | 2.430 | 2.390 | 2.355 | 2.325 | 2.298 | 2.273 | 2.251 | 2.231 | 2.213 |
| 30 | 5.568 | 4.182 | 3.589 | 3.250 | 3.026 | 2.867 | 2.746 | 2.651 | 2.575 | 2.511 | 2.458 | 2.412 | 2.372 | 2.338 | 2.307 | 2.280 | 2.255 | 2.233 | 2.213 | 2.195 |
| 40 | 5.424 | 4.051 | 3.463 | 3.126 | 2.904 | 2.744 | 2.624 | 2.529 | 2.452 | 2.388 | 2.334 | 2.288 | 2.248 | 2.213 | 2.182 | 2.154 | 2.129 | 2.107 | 2.086 | 2.068 |
| 50 | 5.340 | 3.975 | 3.390 | 3.054 | 2.833 | 2.674 | 2.553 | 2.458 | 2.381 | 2.317 | 2.263 | 2.216 | 2.176 | 2.140 | 2.109 | 2.081 | 2.056 | 2.033 | 2.012 | 1.993 |
| 60 | 5.286 | 3.925 | 3.343 | 3.008 | 2.786 | 2.627 | 2.507 | 2.412 | 2.334 | 2.270 | 2.216 | 2.169 | 2.129 | 2.093 | 2.061 | 2.033 | 2.008 | 1.985 | 1.964 | 1.944 |
| 70 | 5.247 | 3.890 | 3.309 | 2.975 | 2.754 | 2.595 | 2.474 | 2.379 | 2.302 | 2.237 | 2.183 | 2.136 | 2.095 | 2.059 | 2.028 | 1.999 | 1.974 | 1.950 | 1.929 | 1.910 |
| 80 | 5.218 | 3.864 | 3.284 | 2.950 | 2.730 | 2.571 | 2.450 | 2.355 | 2.277 | 2.213 | 2.158 | 2.111 | 2.071 | 2.035 | 2.003 | 1.974 | 1.948 | 1.925 | 1.904 | 1.884 |
| 90 | 5.196 | 3.844 | 3.265 | 2.932 | 2.711 | 2.552 | 2.432 | 2.336 | 2.259 | 2.194 | 2.140 | 2.092 | 2.051 | 2.015 | 1.983 | 1.955 | 1.929 | 1.905 | 1.884 | 1.864 |
| 100 | 5.179 | 3.828 | 3.250 | 2.917 | 2.696 | 2.537 | 2.417 | 2.321 | 2.244 | 2.179 | 2.124 | 2.077 | 2.036 | 2.000 | 1.968 | 1.939 | 1.913 | 1.890 | 1.868 | 1.849 |
| 200 | 5.100 | 3.758 | 3.182 | 2.850 | 2.630 | 2.472 | 2.351 | 2.256 | 2.178 | 2.113 | 2.058 | 2.010 | 1.969 | 1.932 | 1.900 | 1.870 | 1.844 | 1.820 | 1.798 | 1.778 |
| 500 | 5.054 | 3.716 | 3.142 | 2.811 | 2.592 | 2.434 | 2.313 | 2.217 | 2.139 | 2.074 | 2.019 | 1.971 | 1.929 | 1.892 | 1.859 | 1.830 | 1.803 | 1.779 | 1.757 | 1.736 |
| 1000 | 5.039 | 3.703 | 3.129 | 2.799 | 2.579 | 2.421 | 2.300 | 2.204 | 2.126 | 2.061 | 2.006 | 1.958 | 1.916 | 1.879 | 1.846 | 1.816 | 1.789 | 1.765 | 1.743 | 1.722 |

Elaborada por Irene Patricia Valdez y Alfaro.

Tabla 5. VALORES F DE LA DISTRIBUCIÓN F DE FISHER

1 - α =0.975

1 - α = P (F \leq f $_{\alpha,v_1,v_2}$)

| $v_2 \backslash v_1$ | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | 200 | 500 | 1000 |
|----------------------|---------|---------|---------|---------|---------|---------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 1 | 994.303 | 995.351 | 996.341 | 997.272 | 998.087 | 998.843 | 999.542 | 1000.240 | 1000.823 | 1001.405 | 1005.596 | 1008.098 | 1009.787 | 1011.009 | 1011.911 | 1012.610 | 1013.163 | 1015.724 | 1017.237 | 1017.761 |
| 2 | 39.450 | 39.452 | 39.455 | 39.457 | 39.458 | 39.459 | 39.461 | 39.462 | 39.463 | 39.465 | 39.473 | 39.478 | 39.481 | 39.484 | 39.486 | 39.487 | 39.488 | 39.493 | 39.496 | 39.497 |
| 3 | 14.155 | 14.144 | 14.134 | 14.124 | 14.115 | 14.107 | 14.100 | 14.093 | 14.086 | 14.081 | 14.036 | 14.010 | 13.992 | 13.979 | 13.970 | 13.962 | 13.956 | 13.929 | 13.913 | 13.908 |
| 4 | 8.546 | 8.533 | 8.522 | 8.511 | 8.501 | 8.492 | 8.483 | 8.475 | 8.468 | 8.461 | 8.411 | 8.381 | 8.360 | 8.346 | 8.335 | 8.326 | 8.319 | 8.288 | 8.270 | 8.264 |
| 5 | 6.314 | 6.301 | 6.289 | 6.278 | 6.268 | 6.258 | 6.250 | 6.242 | 6.234 | 6.227 | 6.175 | 6.144 | 6.123 | 6.107 | 6.096 | 6.087 | 6.080 | 6.048 | 6.028 | 6.022 |
| 6 | 5.154 | 5.141 | 5.128 | 5.117 | 5.107 | 5.097 | 5.088 | 5.080 | 5.072 | 5.065 | 5.012 | 4.980 | 4.959 | 4.943 | 4.932 | 4.923 | 4.915 | 4.882 | 4.862 | 4.856 |
| 7 | 4.452 | 4.439 | 4.426 | 4.415 | 4.405 | 4.395 | 4.386 | 4.378 | 4.370 | 4.362 | 4.309 | 4.276 | 4.254 | 4.239 | 4.227 | 4.218 | 4.210 | 4.176 | 4.156 | 4.149 |
| 8 | 3.985 | 3.971 | 3.959 | 3.947 | 3.937 | 3.927 | 3.918 | 3.909 | 3.901 | 3.894 | 3.840 | 3.807 | 3.784 | 3.768 | 3.756 | 3.747 | 3.739 | 3.705 | 3.684 | 3.677 |
| 9 | 3.652 | 3.638 | 3.626 | 3.614 | 3.604 | 3.594 | 3.584 | 3.576 | 3.568 | 3.560 | 3.505 | 3.472 | 3.449 | 3.433 | 3.421 | 3.411 | 3.403 | 3.368 | 3.347 | 3.340 |
| 10 | 3.403 | 3.390 | 3.377 | 3.365 | 3.355 | 3.345 | 3.335 | 3.327 | 3.319 | 3.311 | 3.255 | 3.221 | 3.198 | 3.182 | 3.169 | 3.160 | 3.152 | 3.116 | 3.094 | 3.087 |
| 11 | 3.211 | 3.197 | 3.184 | 3.173 | 3.162 | 3.152 | 3.142 | 3.133 | 3.125 | 3.118 | 3.061 | 3.027 | 3.004 | 2.987 | 2.974 | 2.964 | 2.956 | 2.920 | 2.898 | 2.890 |
| 12 | 3.057 | 3.043 | 3.031 | 3.019 | 3.008 | 2.998 | 2.988 | 2.979 | 2.971 | 2.963 | 2.906 | 2.871 | 2.848 | 2.831 | 2.818 | 2.808 | 2.800 | 2.763 | 2.740 | 2.733 |
| 13 | 2.932 | 2.918 | 2.905 | 2.893 | 2.882 | 2.872 | 2.862 | 2.853 | 2.845 | 2.837 | 2.780 | 2.744 | 2.720 | 2.703 | 2.690 | 2.680 | 2.671 | 2.634 | 2.611 | 2.603 |
| 14 | 2.828 | 2.814 | 2.801 | 2.789 | 2.778 | 2.767 | 2.758 | 2.749 | 2.740 | 2.732 | 2.674 | 2.638 | 2.614 | 2.597 | 2.583 | 2.573 | 2.565 | 2.526 | 2.503 | 2.495 |
| 15 | 2.740 | 2.726 | 2.713 | 2.701 | 2.689 | 2.679 | 2.669 | 2.660 | 2.652 | 2.644 | 2.585 | 2.549 | 2.524 | 2.506 | 2.493 | 2.482 | 2.474 | 2.435 | 2.411 | 2.403 |
| 16 | 2.665 | 2.651 | 2.637 | 2.625 | 2.614 | 2.603 | 2.594 | 2.584 | 2.576 | 2.568 | 2.509 | 2.472 | 2.447 | 2.429 | 2.415 | 2.405 | 2.396 | 2.357 | 2.333 | 2.324 |
| 17 | 2.600 | 2.585 | 2.572 | 2.560 | 2.548 | 2.538 | 2.528 | 2.519 | 2.510 | 2.502 | 2.442 | 2.405 | 2.380 | 2.362 | 2.348 | 2.337 | 2.329 | 2.289 | 2.264 | 2.256 |
| 18 | 2.543 | 2.529 | 2.515 | 2.503 | 2.491 | 2.481 | 2.471 | 2.461 | 2.453 | 2.445 | 2.384 | 2.347 | 2.321 | 2.303 | 2.289 | 2.278 | 2.269 | 2.229 | 2.204 | 2.195 |
| 19 | 2.493 | 2.478 | 2.465 | 2.452 | 2.441 | 2.430 | 2.420 | 2.411 | 2.402 | 2.394 | 2.333 | 2.295 | 2.270 | 2.251 | 2.237 | 2.226 | 2.217 | 2.176 | 2.150 | 2.142 |
| 20 | 2.448 | 2.434 | 2.420 | 2.408 | 2.396 | 2.385 | 2.375 | 2.366 | 2.357 | 2.349 | 2.287 | 2.249 | 2.223 | 2.205 | 2.190 | 2.179 | 2.170 | 2.128 | 2.103 | 2.094 |
| 21 | 2.409 | 2.394 | 2.380 | 2.368 | 2.356 | 2.345 | 2.335 | 2.325 | 2.317 | 2.308 | 2.246 | 2.208 | 2.182 | 2.163 | 2.148 | 2.137 | 2.128 | 2.086 | 2.060 | 2.051 |
| 22 | 2.373 | 2.358 | 2.344 | 2.332 | 2.320 | 2.309 | 2.299 | 2.289 | 2.280 | 2.272 | 2.210 | 2.171 | 2.145 | 2.125 | 2.111 | 2.099 | 2.090 | 2.047 | 2.021 | 2.012 |
| 23 | 2.340 | 2.325 | 2.312 | 2.299 | 2.287 | 2.276 | 2.266 | 2.256 | 2.247 | 2.239 | 2.176 | 2.137 | 2.111 | 2.091 | 2.077 | 2.065 | 2.056 | 2.013 | 1.986 | 1.977 |
| 24 | 2.311 | 2.296 | 2.282 | 2.269 | 2.257 | 2.246 | 2.236 | 2.226 | 2.217 | 2.209 | 2.146 | 2.107 | 2.080 | 2.060 | 2.045 | 2.034 | 2.024 | 1.981 | 1.954 | 1.945 |
| 25 | 2.284 | 2.269 | 2.255 | 2.242 | 2.230 | 2.219 | 2.209 | 2.199 | 2.190 | 2.182 | 2.118 | 2.079 | 2.052 | 2.032 | 2.017 | 2.005 | 1.996 | 1.952 | 1.924 | 1.915 |
| 26 | 2.259 | 2.244 | 2.230 | 2.217 | 2.205 | 2.194 | 2.184 | 2.174 | 2.165 | 2.157 | 2.093 | 2.053 | 2.026 | 2.006 | 1.991 | 1.979 | 1.969 | 1.925 | 1.897 | 1.888 |
| 27 | 2.237 | 2.222 | 2.208 | 2.195 | 2.183 | 2.171 | 2.161 | 2.151 | 2.142 | 2.133 | 2.069 | 2.029 | 2.002 | 1.982 | 1.966 | 1.954 | 1.945 | 1.900 | 1.872 | 1.862 |
| 28 | 2.216 | 2.201 | 2.187 | 2.174 | 2.161 | 2.150 | 2.140 | 2.130 | 2.121 | 2.112 | 2.048 | 2.007 | 1.980 | 1.959 | 1.944 | 1.932 | 1.922 | 1.877 | 1.848 | 1.839 |
| 29 | 2.196 | 2.181 | 2.167 | 2.154 | 2.142 | 2.131 | 2.120 | 2.110 | 2.101 | 2.092 | 2.028 | 1.987 | 1.959 | 1.939 | 1.923 | 1.911 | 1.901 | 1.855 | 1.827 | 1.817 |
| 30 | 2.178 | 2.163 | 2.149 | 2.136 | 2.124 | 2.112 | 2.102 | 2.092 | 2.083 | 2.074 | 2.009 | 1.968 | 1.940 | 1.920 | 1.904 | 1.892 | 1.882 | 1.835 | 1.806 | 1.797 |
| 40 | 2.051 | 2.035 | 2.020 | 2.007 | 1.994 | 1.983 | 1.972 | 1.962 | 1.952 | 1.943 | 1.875 | 1.832 | 1.803 | 1.781 | 1.764 | 1.751 | 1.741 | 1.691 | 1.659 | 1.648 |
| 50 | 1.976 | 1.960 | 1.945 | 1.931 | 1.919 | 1.907 | 1.895 | 1.885 | 1.875 | 1.866 | 1.796 | 1.752 | 1.721 | 1.698 | 1.681 | 1.667 | 1.656 | 1.603 | 1.569 | 1.557 |
| 60 | 1.927 | 1.911 | 1.896 | 1.882 | 1.869 | 1.857 | 1.845 | 1.835 | 1.825 | 1.815 | 1.744 | 1.699 | 1.667 | 1.643 | 1.625 | 1.611 | 1.599 | 1.543 | 1.507 | 1.495 |
| 70 | 1.892 | 1.876 | 1.861 | 1.847 | 1.833 | 1.821 | 1.810 | 1.799 | 1.789 | 1.779 | 1.707 | 1.660 | 1.628 | 1.604 | 1.585 | 1.570 | 1.558 | 1.500 | 1.463 | 1.449 |
| 80 | 1.866 | 1.850 | 1.835 | 1.820 | 1.807 | 1.795 | 1.783 | 1.772 | 1.762 | 1.752 | 1.679 | 1.632 | 1.599 | 1.574 | 1.555 | 1.540 | 1.527 | 1.467 | 1.428 | 1.414 |
| 90 | 1.846 | 1.830 | 1.814 | 1.800 | 1.787 | 1.774 | 1.763 | 1.752 | 1.741 | 1.731 | 1.657 | 1.610 | 1.576 | 1.551 | 1.531 | 1.516 | 1.503 | 1.441 | 1.401 | 1.386 |
| 100 | 1.830 | 1.814 | 1.798 | 1.784 | 1.770 | 1.758 | 1.746 | 1.735 | 1.725 | 1.715 | 1.640 | 1.592 | 1.558 | 1.532 | 1.512 | 1.496 | 1.483 | 1.420 | 1.378 | 1.363 |
| 200 | 1.759 | 1.742 | 1.726 | 1.712 | 1.698 | 1.685 | 1.673 | 1.661 | 1.650 | 1.640 | 1.562 | 1.511 | 1.474 | 1.447 | 1.425 | 1.407 | 1.393 | 1.320 | 1.269 | 1.250 |
| 500 | 1.717 | 1.700 | 1.684 | 1.669 | 1.655 | 1.641 | 1.629 | 1.617 | 1.606 | 1.596 | 1.515 | 1.462 | 1.423 | 1.394 | 1.370 | 1.351 | 1.336 | 1.254 | 1.192 | 1.166 |
| 1000 | 1.703 | 1.686 | 1.670 | 1.654 | 1.640 | 1.627 | 1.614 | 1.603 | 1.591 | 1.581 | 1.499 | 1.445 | 1.406 | 1.376 | 1.352 | 1.332 | 1.316 | 1.230 | 1.162 | 1.132 |

Elaborada por Irene Patricia Valdez y Alfaro.

Tabla 5. VALORES F DE LA DISTRIBUCIÓN F DE FISHER

1 - $\alpha = 0.99$

v_1 = grados de libertad del numerador

1 - $\alpha = P (F \leq f_{\alpha, v_1, v_2})$

v_2 = grados de libertad del denominador

| $v_2 \backslash v_1$ | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|----------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 1 | 4052.185 | 4999.340 | 5403.534 | 5624.257 | 5763.955 | 5858.950 | 5928.334 | 5980.954 | 6022.397 | 6055.925 | 6083.399 | 6106.682 | 6125.774 | 6143.004 | 6156.974 | 6170.012 | 6181.188 | 6191.432 | 6200.746 | 6208.662 |
| 2 | 98.502 | 99.000 | 99.164 | 99.251 | 99.302 | 99.331 | 99.357 | 99.375 | 99.390 | 99.397 | 99.408 | 99.419 | 99.422 | 99.426 | 99.433 | 99.437 | 99.441 | 99.444 | 99.448 | 99.448 |
| 3 | 34.116 | 30.816 | 29.457 | 28.710 | 28.237 | 27.911 | 27.671 | 27.489 | 27.345 | 27.228 | 27.132 | 27.052 | 26.983 | 26.924 | 26.872 | 26.826 | 26.786 | 26.751 | 26.719 | 26.690 |
| 4 | 21.198 | 18.000 | 16.694 | 15.977 | 15.522 | 15.207 | 14.976 | 14.799 | 14.659 | 14.546 | 14.452 | 14.374 | 14.306 | 14.249 | 14.198 | 14.154 | 14.114 | 14.079 | 14.048 | 14.019 |
| 5 | 16.258 | 13.274 | 12.060 | 11.392 | 10.967 | 10.672 | 10.456 | 10.289 | 10.158 | 10.051 | 9.963 | 9.888 | 9.825 | 9.770 | 9.722 | 9.680 | 9.643 | 9.609 | 9.580 | 9.553 |
| 6 | 13.745 | 10.925 | 9.780 | 9.148 | 8.746 | 8.466 | 8.260 | 8.102 | 7.976 | 7.874 | 7.790 | 7.718 | 7.657 | 7.605 | 7.559 | 7.519 | 7.483 | 7.451 | 7.422 | 7.396 |
| 7 | 12.246 | 9.547 | 8.451 | 7.847 | 7.460 | 7.191 | 6.993 | 6.840 | 6.719 | 6.620 | 6.538 | 6.469 | 6.410 | 6.359 | 6.314 | 6.275 | 6.240 | 6.209 | 6.181 | 6.155 |
| 8 | 11.259 | 8.649 | 7.591 | 7.006 | 6.632 | 6.371 | 6.178 | 6.029 | 5.911 | 5.814 | 5.734 | 5.667 | 5.609 | 5.559 | 5.515 | 5.477 | 5.442 | 5.412 | 5.384 | 5.359 |
| 9 | 10.562 | 8.022 | 6.992 | 6.422 | 6.057 | 5.802 | 5.613 | 5.467 | 5.351 | 5.257 | 5.178 | 5.111 | 5.055 | 5.005 | 4.962 | 4.924 | 4.890 | 4.860 | 4.833 | 4.808 |
| 10 | 10.044 | 7.559 | 6.552 | 5.994 | 5.636 | 5.386 | 5.200 | 5.057 | 4.942 | 4.849 | 4.772 | 4.706 | 4.650 | 4.601 | 4.558 | 4.520 | 4.487 | 4.457 | 4.430 | 4.405 |
| 11 | 9.646 | 7.206 | 6.217 | 5.668 | 5.316 | 5.069 | 4.886 | 4.744 | 4.632 | 4.539 | 4.462 | 4.397 | 4.342 | 4.293 | 4.251 | 4.213 | 4.180 | 4.150 | 4.123 | 4.099 |
| 12 | 9.330 | 6.927 | 5.953 | 5.412 | 5.064 | 4.821 | 4.640 | 4.499 | 4.388 | 4.296 | 4.220 | 4.155 | 4.100 | 4.052 | 4.010 | 3.972 | 3.939 | 3.910 | 3.883 | 3.858 |
| 13 | 9.074 | 6.701 | 5.739 | 5.205 | 4.862 | 4.620 | 4.441 | 4.302 | 4.191 | 4.100 | 4.025 | 3.960 | 3.905 | 3.857 | 3.815 | 3.778 | 3.745 | 3.716 | 3.689 | 3.665 |
| 14 | 8.862 | 6.515 | 5.564 | 5.035 | 4.695 | 4.456 | 4.278 | 4.140 | 4.030 | 3.939 | 3.864 | 3.800 | 3.745 | 3.698 | 3.656 | 3.619 | 3.586 | 3.556 | 3.529 | 3.505 |
| 15 | 8.683 | 6.359 | 5.417 | 4.893 | 4.556 | 4.318 | 4.142 | 4.004 | 3.895 | 3.805 | 3.730 | 3.666 | 3.612 | 3.564 | 3.522 | 3.485 | 3.452 | 3.423 | 3.396 | 3.372 |
| 16 | 8.531 | 6.226 | 5.292 | 4.773 | 4.437 | 4.202 | 4.026 | 3.890 | 3.780 | 3.691 | 3.616 | 3.553 | 3.498 | 3.451 | 3.409 | 3.372 | 3.339 | 3.310 | 3.283 | 3.259 |
| 17 | 8.400 | 6.112 | 5.185 | 4.669 | 4.336 | 4.101 | 3.927 | 3.791 | 3.682 | 3.593 | 3.518 | 3.455 | 3.401 | 3.353 | 3.312 | 3.275 | 3.242 | 3.212 | 3.186 | 3.162 |
| 18 | 8.285 | 6.013 | 5.092 | 4.579 | 4.248 | 4.015 | 3.841 | 3.705 | 3.597 | 3.508 | 3.434 | 3.371 | 3.316 | 3.269 | 3.227 | 3.190 | 3.158 | 3.128 | 3.101 | 3.077 |
| 19 | 8.185 | 5.926 | 5.010 | 4.500 | 4.171 | 3.939 | 3.765 | 3.631 | 3.523 | 3.434 | 3.360 | 3.297 | 3.242 | 3.195 | 3.153 | 3.116 | 3.084 | 3.054 | 3.027 | 3.003 |
| 20 | 8.096 | 5.849 | 4.938 | 4.431 | 4.103 | 3.871 | 3.699 | 3.564 | 3.457 | 3.368 | 3.294 | 3.231 | 3.177 | 3.130 | 3.088 | 3.051 | 3.018 | 2.989 | 2.962 | 2.938 |
| 21 | 8.017 | 5.780 | 4.874 | 4.369 | 4.042 | 3.812 | 3.640 | 3.506 | 3.398 | 3.310 | 3.236 | 3.173 | 3.119 | 3.072 | 3.030 | 2.993 | 2.960 | 2.931 | 2.904 | 2.880 |
| 22 | 7.945 | 5.719 | 4.817 | 4.313 | 3.988 | 3.758 | 3.587 | 3.453 | 3.346 | 3.258 | 3.184 | 3.121 | 3.067 | 3.019 | 2.978 | 2.941 | 2.908 | 2.879 | 2.852 | 2.827 |
| 23 | 7.881 | 5.664 | 4.765 | 4.264 | 3.939 | 3.710 | 3.539 | 3.406 | 3.299 | 3.211 | 3.137 | 3.074 | 3.020 | 2.973 | 2.931 | 2.894 | 2.861 | 2.832 | 2.805 | 2.780 |
| 24 | 7.823 | 5.614 | 4.718 | 4.218 | 3.895 | 3.667 | 3.496 | 3.363 | 3.256 | 3.168 | 3.094 | 3.032 | 2.977 | 2.930 | 2.889 | 2.852 | 2.819 | 2.789 | 2.762 | 2.738 |
| 25 | 7.770 | 5.568 | 4.675 | 4.177 | 3.855 | 3.627 | 3.457 | 3.324 | 3.217 | 3.129 | 3.056 | 2.993 | 2.939 | 2.892 | 2.850 | 2.813 | 2.780 | 2.751 | 2.724 | 2.699 |
| 26 | 7.721 | 5.526 | 4.637 | 4.140 | 3.818 | 3.591 | 3.421 | 3.288 | 3.182 | 3.094 | 3.021 | 2.958 | 2.904 | 2.857 | 2.815 | 2.778 | 2.745 | 2.715 | 2.688 | 2.664 |
| 27 | 7.677 | 5.488 | 4.601 | 4.106 | 3.785 | 3.558 | 3.388 | 3.256 | 3.149 | 3.062 | 2.988 | 2.926 | 2.872 | 2.824 | 2.783 | 2.746 | 2.713 | 2.683 | 2.656 | 2.632 |
| 28 | 7.636 | 5.453 | 4.568 | 4.074 | 3.754 | 3.528 | 3.358 | 3.226 | 3.120 | 3.032 | 2.959 | 2.896 | 2.842 | 2.795 | 2.753 | 2.716 | 2.683 | 2.653 | 2.626 | 2.602 |
| 29 | 7.598 | 5.420 | 4.538 | 4.045 | 3.725 | 3.499 | 3.330 | 3.198 | 3.092 | 3.005 | 2.931 | 2.868 | 2.814 | 2.767 | 2.726 | 2.689 | 2.656 | 2.626 | 2.599 | 2.574 |
| 30 | 7.562 | 5.390 | 4.510 | 4.018 | 3.699 | 3.473 | 3.305 | 3.173 | 3.067 | 2.979 | 2.906 | 2.843 | 2.789 | 2.742 | 2.700 | 2.663 | 2.630 | 2.600 | 2.573 | 2.549 |
| 40 | 7.314 | 5.178 | 4.313 | 3.828 | 3.514 | 3.291 | 3.124 | 2.993 | 2.888 | 2.801 | 2.727 | 2.665 | 2.611 | 2.563 | 2.522 | 2.484 | 2.451 | 2.421 | 2.394 | 2.369 |
| 50 | 7.171 | 5.057 | 4.199 | 3.720 | 3.408 | 3.186 | 3.020 | 2.890 | 2.785 | 2.698 | 2.625 | 2.563 | 2.508 | 2.461 | 2.419 | 2.382 | 2.348 | 2.318 | 2.290 | 2.265 |
| 60 | 7.077 | 4.977 | 4.126 | 3.649 | 3.339 | 3.119 | 2.953 | 2.823 | 2.718 | 2.632 | 2.559 | 2.496 | 2.442 | 2.394 | 2.352 | 2.315 | 2.281 | 2.251 | 2.223 | 2.198 |
| 70 | 7.011 | 4.922 | 4.074 | 3.600 | 3.291 | 3.071 | 2.906 | 2.777 | 2.672 | 2.585 | 2.512 | 2.450 | 2.395 | 2.348 | 2.306 | 2.268 | 2.234 | 2.204 | 2.176 | 2.150 |
| 80 | 6.963 | 4.881 | 4.036 | 3.563 | 3.255 | 3.036 | 2.871 | 2.742 | 2.637 | 2.551 | 2.478 | 2.415 | 2.361 | 2.313 | 2.271 | 2.233 | 2.199 | 2.169 | 2.141 | 2.115 |
| 90 | 6.925 | 4.849 | 4.007 | 3.535 | 3.228 | 3.009 | 2.845 | 2.715 | 2.611 | 2.524 | 2.451 | 2.389 | 2.334 | 2.286 | 2.244 | 2.206 | 2.172 | 2.142 | 2.114 | 2.088 |
| 100 | 6.895 | 4.824 | 3.984 | 3.513 | 3.206 | 2.988 | 2.823 | 2.694 | 2.590 | 2.503 | 2.430 | 2.368 | 2.313 | 2.265 | 2.223 | 2.185 | 2.151 | 2.120 | 2.092 | 2.067 |
| 200 | 6.763 | 4.713 | 3.881 | 3.414 | 3.110 | 2.893 | 2.730 | 2.601 | 2.497 | 2.411 | 2.338 | 2.275 | 2.220 | 2.172 | 2.129 | 2.091 | 2.057 | 2.026 | 1.997 | 1.971 |
| 500 | 6.686 | 4.648 | 3.821 | 3.357 | 3.054 | 2.838 | 2.675 | 2.547 | 2.443 | 2.356 | 2.283 | 2.220 | 2.166 | 2.117 | 2.075 | 2.036 | 2.002 | 1.970 | 1.942 | 1.915 |
| 1000 | 6.660 | 4.626 | 3.801 | 3.338 | 3.036 | 2.820 | 2.657 | 2.529 | 2.425 | 2.339 | 2.265 | 2.203 | 2.148 | 2.099 | 2.056 | 2.018 | 1.983 | 1.952 | 1.923 | 1.897 |

Elaborada por Irene Patricia Valdez y Alfaro.

Tabla 5. VALORES F DE LA DISTRIBUCIÓN F DE FISHER

1 - α =0.99

1 - α = P (F \leq f _{α ,v₁,v₂})

| $\begin{matrix} v_1 \\ \backslash v_2 \end{matrix}$ | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | 200 | 500 | 1000 |
|---|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 1 | 6216.113 | 6223.097 | 6228.685 | 6234.273 | 6239.861 | 6244.518 | 6249.174 | 6252.900 | 6257.091 | 6260.350 | 6286.427 | 6302.260 | 6312.970 | 6320.886 | 6326.474 | 6330.665 | 6333.925 | 6349.757 | 6359.536 | 6362.796 |
| 2 | 99.451 | 99.455 | 99.455 | 99.455 | 99.459 | 99.462 | 99.462 | 99.462 | 99.462 | 99.466 | 99.477 | 99.477 | 99.484 | 99.484 | 99.484 | 99.488 | 99.491 | 99.491 | 99.499 | 99.499 |
| 3 | 26.664 | 26.639 | 26.617 | 26.597 | 26.579 | 26.562 | 26.546 | 26.531 | 26.517 | 26.504 | 26.411 | 26.354 | 26.316 | 26.289 | 26.269 | 26.253 | 26.241 | 26.183 | 26.148 | 26.137 |
| 4 | 13.994 | 13.970 | 13.949 | 13.929 | 13.911 | 13.894 | 13.878 | 13.864 | 13.850 | 13.838 | 13.745 | 13.690 | 13.652 | 13.626 | 13.605 | 13.590 | 13.577 | 13.520 | 13.486 | 13.475 |
| 5 | 9.528 | 9.506 | 9.485 | 9.466 | 9.449 | 9.433 | 9.418 | 9.404 | 9.391 | 9.379 | 9.291 | 9.238 | 9.202 | 9.176 | 9.157 | 9.142 | 9.130 | 9.075 | 9.042 | 9.032 |
| 6 | 7.372 | 7.351 | 7.331 | 7.313 | 7.296 | 7.281 | 7.266 | 7.253 | 7.240 | 7.229 | 7.143 | 7.091 | 7.057 | 7.032 | 7.013 | 6.998 | 6.987 | 6.934 | 6.901 | 6.891 |
| 7 | 6.132 | 6.111 | 6.092 | 6.074 | 6.058 | 6.043 | 6.029 | 6.016 | 6.003 | 5.992 | 5.908 | 5.858 | 5.824 | 5.799 | 5.781 | 5.766 | 5.755 | 5.702 | 5.671 | 5.660 |
| 8 | 5.336 | 5.316 | 5.297 | 5.279 | 5.263 | 5.248 | 5.234 | 5.221 | 5.209 | 5.198 | 5.116 | 5.065 | 5.032 | 5.007 | 4.989 | 4.975 | 4.963 | 4.911 | 4.880 | 4.869 |
| 9 | 4.786 | 4.765 | 4.746 | 4.729 | 4.713 | 4.698 | 4.684 | 4.672 | 4.660 | 4.649 | 4.567 | 4.517 | 4.483 | 4.459 | 4.441 | 4.426 | 4.415 | 4.363 | 4.332 | 4.321 |
| 10 | 4.383 | 4.363 | 4.344 | 4.327 | 4.311 | 4.296 | 4.283 | 4.270 | 4.258 | 4.247 | 4.165 | 4.115 | 4.082 | 4.058 | 4.039 | 4.025 | 4.014 | 3.962 | 3.930 | 3.920 |
| 11 | 4.077 | 4.057 | 4.038 | 4.021 | 4.005 | 3.990 | 3.977 | 3.964 | 3.952 | 3.941 | 3.860 | 3.810 | 3.776 | 3.752 | 3.734 | 3.719 | 3.708 | 3.656 | 3.624 | 3.613 |
| 12 | 3.836 | 3.816 | 3.798 | 3.780 | 3.765 | 3.750 | 3.736 | 3.724 | 3.712 | 3.701 | 3.619 | 3.569 | 3.535 | 3.511 | 3.493 | 3.478 | 3.467 | 3.414 | 3.382 | 3.372 |
| 13 | 3.643 | 3.622 | 3.604 | 3.587 | 3.571 | 3.556 | 3.543 | 3.530 | 3.518 | 3.507 | 3.425 | 3.375 | 3.341 | 3.317 | 3.298 | 3.284 | 3.272 | 3.219 | 3.187 | 3.176 |
| 14 | 3.483 | 3.463 | 3.444 | 3.427 | 3.412 | 3.397 | 3.383 | 3.371 | 3.359 | 3.348 | 3.266 | 3.215 | 3.181 | 3.157 | 3.138 | 3.124 | 3.112 | 3.059 | 3.026 | 3.015 |
| 15 | 3.350 | 3.330 | 3.311 | 3.294 | 3.278 | 3.264 | 3.250 | 3.237 | 3.225 | 3.214 | 3.132 | 3.081 | 3.047 | 3.022 | 3.004 | 2.989 | 2.977 | 2.923 | 2.891 | 2.880 |
| 16 | 3.237 | 3.216 | 3.198 | 3.181 | 3.165 | 3.150 | 3.137 | 3.124 | 3.112 | 3.101 | 3.018 | 2.967 | 2.933 | 2.908 | 2.889 | 2.875 | 2.863 | 2.808 | 2.775 | 2.764 |
| 17 | 3.139 | 3.119 | 3.101 | 3.083 | 3.068 | 3.053 | 3.039 | 3.026 | 3.014 | 3.003 | 2.920 | 2.869 | 2.835 | 2.810 | 2.791 | 2.776 | 2.764 | 2.709 | 2.676 | 2.664 |
| 18 | 3.055 | 3.035 | 3.016 | 2.999 | 2.983 | 2.968 | 2.955 | 2.942 | 2.930 | 2.919 | 2.835 | 2.784 | 2.749 | 2.724 | 2.705 | 2.690 | 2.678 | 2.623 | 2.589 | 2.577 |
| 19 | 2.981 | 2.961 | 2.942 | 2.925 | 2.909 | 2.894 | 2.880 | 2.868 | 2.855 | 2.844 | 2.761 | 2.709 | 2.674 | 2.649 | 2.630 | 2.614 | 2.602 | 2.547 | 2.512 | 2.501 |
| 20 | 2.916 | 2.895 | 2.877 | 2.859 | 2.843 | 2.829 | 2.815 | 2.802 | 2.790 | 2.778 | 2.695 | 2.643 | 2.608 | 2.582 | 2.563 | 2.548 | 2.535 | 2.479 | 2.445 | 2.433 |
| 21 | 2.857 | 2.837 | 2.818 | 2.801 | 2.785 | 2.770 | 2.756 | 2.743 | 2.731 | 2.720 | 2.636 | 2.584 | 2.548 | 2.523 | 2.503 | 2.488 | 2.476 | 2.419 | 2.384 | 2.372 |
| 22 | 2.805 | 2.785 | 2.766 | 2.749 | 2.733 | 2.718 | 2.704 | 2.691 | 2.679 | 2.667 | 2.583 | 2.531 | 2.495 | 2.469 | 2.450 | 2.434 | 2.422 | 2.365 | 2.329 | 2.317 |
| 23 | 2.758 | 2.738 | 2.719 | 2.702 | 2.686 | 2.671 | 2.657 | 2.644 | 2.632 | 2.620 | 2.536 | 2.483 | 2.447 | 2.421 | 2.401 | 2.386 | 2.373 | 2.316 | 2.280 | 2.268 |
| 24 | 2.716 | 2.695 | 2.676 | 2.659 | 2.643 | 2.628 | 2.614 | 2.601 | 2.589 | 2.577 | 2.492 | 2.440 | 2.403 | 2.377 | 2.357 | 2.342 | 2.329 | 2.271 | 2.235 | 2.223 |
| 25 | 2.677 | 2.657 | 2.638 | 2.620 | 2.604 | 2.589 | 2.575 | 2.562 | 2.550 | 2.538 | 2.453 | 2.400 | 2.364 | 2.337 | 2.317 | 2.302 | 2.289 | 2.230 | 2.194 | 2.182 |
| 26 | 2.642 | 2.621 | 2.602 | 2.585 | 2.569 | 2.554 | 2.540 | 2.526 | 2.514 | 2.503 | 2.417 | 2.364 | 2.327 | 2.301 | 2.281 | 2.265 | 2.252 | 2.193 | 2.156 | 2.144 |
| 27 | 2.609 | 2.589 | 2.570 | 2.552 | 2.536 | 2.521 | 2.507 | 2.494 | 2.481 | 2.470 | 2.384 | 2.330 | 2.294 | 2.267 | 2.247 | 2.231 | 2.218 | 2.159 | 2.122 | 2.109 |
| 28 | 2.579 | 2.559 | 2.540 | 2.522 | 2.506 | 2.491 | 2.477 | 2.464 | 2.451 | 2.440 | 2.354 | 2.300 | 2.263 | 2.236 | 2.216 | 2.200 | 2.187 | 2.127 | 2.090 | 2.077 |
| 29 | 2.552 | 2.531 | 2.512 | 2.495 | 2.478 | 2.463 | 2.449 | 2.436 | 2.423 | 2.412 | 2.325 | 2.271 | 2.234 | 2.207 | 2.187 | 2.171 | 2.158 | 2.097 | 2.060 | 2.047 |
| 30 | 2.526 | 2.506 | 2.487 | 2.469 | 2.453 | 2.437 | 2.423 | 2.410 | 2.398 | 2.386 | 2.299 | 2.245 | 2.208 | 2.181 | 2.160 | 2.144 | 2.131 | 2.070 | 2.032 | 2.019 |
| 40 | 2.346 | 2.325 | 2.306 | 2.288 | 2.271 | 2.256 | 2.241 | 2.228 | 2.215 | 2.203 | 2.114 | 2.058 | 2.019 | 1.991 | 1.969 | 1.952 | 1.938 | 1.874 | 1.833 | 1.819 |
| 50 | 2.242 | 2.221 | 2.202 | 2.183 | 2.167 | 2.151 | 2.136 | 2.123 | 2.110 | 2.098 | 2.007 | 1.949 | 1.909 | 1.880 | 1.857 | 1.839 | 1.825 | 1.757 | 1.713 | 1.698 |
| 60 | 2.175 | 2.153 | 2.134 | 2.115 | 2.098 | 2.083 | 2.068 | 2.054 | 2.041 | 2.028 | 1.936 | 1.877 | 1.836 | 1.806 | 1.783 | 1.764 | 1.749 | 1.678 | 1.633 | 1.617 |
| 70 | 2.127 | 2.106 | 2.086 | 2.067 | 2.050 | 2.034 | 2.019 | 2.005 | 1.992 | 1.980 | 1.886 | 1.826 | 1.785 | 1.754 | 1.730 | 1.711 | 1.695 | 1.622 | 1.574 | 1.558 |
| 80 | 2.092 | 2.070 | 2.050 | 2.032 | 2.015 | 1.999 | 1.983 | 1.969 | 1.956 | 1.944 | 1.849 | 1.788 | 1.746 | 1.714 | 1.690 | 1.671 | 1.655 | 1.579 | 1.530 | 1.512 |
| 90 | 2.065 | 2.043 | 2.023 | 2.004 | 1.987 | 1.971 | 1.956 | 1.942 | 1.928 | 1.916 | 1.820 | 1.759 | 1.716 | 1.684 | 1.659 | 1.639 | 1.623 | 1.546 | 1.494 | 1.476 |
| 100 | 2.043 | 2.021 | 2.001 | 1.983 | 1.965 | 1.949 | 1.934 | 1.919 | 1.906 | 1.893 | 1.797 | 1.735 | 1.692 | 1.659 | 1.634 | 1.614 | 1.598 | 1.518 | 1.466 | 1.447 |
| 200 | 1.947 | 1.925 | 1.905 | 1.886 | 1.868 | 1.851 | 1.836 | 1.821 | 1.807 | 1.794 | 1.694 | 1.629 | 1.583 | 1.548 | 1.521 | 1.499 | 1.481 | 1.391 | 1.328 | 1.304 |
| 500 | 1.891 | 1.869 | 1.848 | 1.829 | 1.810 | 1.794 | 1.778 | 1.763 | 1.749 | 1.735 | 1.633 | 1.566 | 1.517 | 1.481 | 1.452 | 1.428 | 1.408 | 1.308 | 1.232 | 1.201 |
| 1000 | 1.872 | 1.850 | 1.829 | 1.810 | 1.791 | 1.774 | 1.758 | 1.743 | 1.729 | 1.716 | 1.613 | 1.544 | 1.495 | 1.458 | 1.428 | 1.404 | 1.383 | 1.278 | 1.195 | 1.159 |

Elaborada por Irene Patricia Valdez y Alfaro.