**Tab. 1a:** Hodnoty distribuční funkce $\Phi(x)$ standardizovaného normálního rozdělení.

| $x$ | $\Phi(x)$ | $x$ | $\Phi(x)$ | $x$ | $\Phi(x)$ | $x$ | $\Phi(x)$ | $x$ | $\Phi(x)$ |
|---|---|---|---|---|---|---|---|---|---|
| 0.00 | 0.5000 | 0.40 | 0.6554 | 0.80 | 0.7881 | 1.20 | 0.8849 | 1.60 | 0.9452 |
| 0.01 | 0.5040 | 0.41 | 0.6591 | 0.81 | 0.7910 | 1.21 | 0.8869 | 1.61 | 0.9463 |
| 0.02 | 0.5080 | 0.42 | 0.6628 | 0.82 | 0.7939 | 1.22 | 0.8888 | 1.62 | 0.9474 |
| 0.03 | 0.5120 | 0.43 | 0.6664 | 0.83 | 0.7967 | 1.23 | 0.8907 | 1.63 | 0.9484 |
| 0.04 | 0.5160 | 0.44 | 0.6700 | 0.84 | 0.7995 | 1.24 | 0.8925 | 1.64 | 0.9495 |
| 0.05 | 0.5199 | 0.45 | 0.6736 | 0.85 | 0.8023 | 1.25 | 0.8944 | 1.65 | 0.9505 |
| 0.06 | 0.5239 | 0.46 | 0.6772 | 0.86 | 0.8051 | 1.26 | 0.8962 | 1.66 | 0.9515 |
| 0.07 | 0.5279 | 0.47 | 0.6808 | 0.87 | 0.8078 | 1.27 | 0.8980 | 1.67 | 0.9525 |
| 0.08 | 0.5319 | 0.48 | 0.6844 | 0.88 | 0.8106 | 1.28 | 0.8997 | 1.68 | 0.9535 |
| 0.09 | 0.5359 | 0.49 | 0.6879 | 0.89 | 0.8133 | 1.29 | 0.9015 | 1.69 | 0.9545 |
| 0.10 | 0.5398 | 0.50 | 0.6915 | 0.90 | 0.8159 | 1.30 | 0.9032 | 1.70 | 0.9554 |
| 0.11 | 0.5438 | 0.51 | 0.6950 | 0.91 | 0.8186 | 1.31 | 0.9049 | 1.71 | 0.9564 |
| 0.12 | 0.5478 | 0.52 | 0.6985 | 0.92 | 0.8212 | 1.32 | 0.9066 | 1.72 | 0.9573 |
| 0.13 | 0.5517 | 0.53 | 0.7019 | 0.93 | 0.8238 | 1.33 | 0.9082 | 1.73 | 0.9582 |
| 0.14 | 0.5557 | 0.54 | 0.7054 | 0.94 | 0.8264 | 1.34 | 0.9099 | 1.74 | 0.9591 |
| 0.15 | 0.5596 | 0.55 | 0.7088 | 0.95 | 0.8289 | 1.35 | 0.9115 | 1.75 | 0.9599 |
| 0.16 | 0.5636 | 0.56 | 0.7123 | 0.96 | 0.8315 | 1.36 | 0.9131 | 1.76 | 0.9608 |
| 0.17 | 0.5675 | 0.57 | 0.7157 | 0.97 | 0.8340 | 1.37 | 0.9147 | 1.77 | 0.9616 |
| 0.18 | 0.5714 | 0.58 | 0.7190 | 0.98 | 0.8365 | 1.38 | 0.9162 | 1.78 | 0.9625 |
| 0.19 | 0.5753 | 0.59 | 0.7224 | 0.99 | 0.8389 | 1.39 | 0.9177 | 1.79 | 0.9633 |
| 0.20 | 0.5793 | 0.60 | 0.7257 | 1.00 | 0.8413 | 1.40 | 0.9192 | 1.80 | 0.9641 |
| 0.21 | 0.5832 | 0.61 | 0.7291 | 1.01 | 0.8438 | 1.41 | 0.9207 | 1.81 | 0.9649 |
| 0.22 | 0.5871 | 0.62 | 0.7324 | 1.02 | 0.8461 | 1.42 | 0.9222 | 1.82 | 0.9656 |
| 0.23 | 0.5910 | 0.63 | 0.7357 | 1.03 | 0.8485 | 1.43 | 0.9236 | 1.83 | 0.9664 |
| 0.24 | 0.5948 | 0.64 | 0.7389 | 1.04 | 0.8508 | 1.44 | 0.9251 | 1.84 | 0.9671 |
| 0.25 | 0.5987 | 0.65 | 0.7422 | 1.05 | 0.8531 | 1.45 | 0.9265 | 1.85 | 0.9678 |
| 0.26 | 0.6026 | 0.66 | 0.7454 | 1.06 | 0.8554 | 1.46 | 0.9279 | 1.86 | 0.9686 |
| 0.27 | 0.6064 | 0.67 | 0.7486 | 1.07 | 0.8577 | 1.47 | 0.9292 | 1.87 | 0.9693 |
| 0.28 | 0.6103 | 0.68 | 0.7517 | 1.08 | 0.8599 | 1.48 | 0.9306 | 1.88 | 0.9699 |
| 0.29 | 0.6141 | 0.69 | 0.7549 | 1.09 | 0.8621 | 1.49 | 0.9319 | 1.89 | 0.9706 |
| 0.30 | 0.6179 | 0.70 | 0.7580 | 1.10 | 0.8643 | 1.50 | 0.9332 | 1.90 | 0.9713 |
| 0.31 | 0.6217 | 0.71 | 0.7611 | 1.11 | 0.8665 | 1.51 | 0.9345 | 1.91 | 0.9719 |
| 0.32 | 0.6255 | 0.72 | 0.7642 | 1.12 | 0.8686 | 1.52 | 0.9357 | 1.92 | 0.9726 |
| 0.33 | 0.6293 | 0.73 | 0.7673 | 1.13 | 0.8708 | 1.53 | 0.9370 | 1.93 | 0.9732 |
| 0.34 | 0.6331 | 0.74 | 0.7704 | 1.14 | 0.8729 | 1.54 | 0.9382 | 1.94 | 0.9738 |
| 0.35 | 0.6368 | 0.75 | 0.7734 | 1.15 | 0.8749 | 1.55 | 0.9394 | 1.95 | 0.9744 |
| 0.36 | 0.6406 | 0.76 | 0.7764 | 1.16 | 0.8770 | 1.56 | 0.9406 | 1.96 | 0.9750 |
| 0.37 | 0.6443 | 0.77 | 0.7794 | 1.17 | 0.8790 | 1.57 | 0.9418 | 1.97 | 0.9756 |
| 0.38 | 0.6480 | 0.78 | 0.7823 | 1.18 | 0.8810 | 1.58 | 0.9429 | 1.98 | 0.9761 |
| 0.39 | 0.6517 | 0.79 | 0.7852 | 1.19 | 0.8830 | 1.59 | 0.9441 | 1.99 | 0.9767 |

**Tab. 1b:** Hodnoty distribuční funkce $\Phi(x)$ standardizovaného normálního rozdělení.

| $x$ | $\Phi(x)$ | $x$ | $\Phi(x)$ | $x$ | $\Phi(x)$ | $x$ | $\Phi(x)$ | $x$ | $\Phi(x)$ |
|---|---|---|---|---|---|---|---|---|---|
| 2.00 | 0.9772 | 2.40 | 0.9918 | 2.80 | 0.9974 | 3.20 | 0.9993 | 3.60 | 0.9998 |
| 2.01 | 0.9778 | 2.41 | 0.9920 | 2.81 | 0.9975 | 3.21 | 0.9993 | 3.61 | 0.9998 |
| 2.02 | 0.9783 | 2.42 | 0.9922 | 2.82 | 0.9976 | 3.22 | 0.9994 | 3.62 | 0.9999 |
| 2.03 | 0.9788 | 2.43 | 0.9925 | 2.83 | 0.9977 | 3.23 | 0.9994 | 3.63 | 0.9999 |
| 2.04 | 0.9793 | 2.44 | 0.9927 | 2.84 | 0.9977 | 3.24 | 0.9994 | 3.64 | 0.9999 |
| 2.05 | 0.9798 | 2.45 | 0.9929 | 2.85 | 0.9978 | 3.25 | 0.9994 | 3.65 | 0.9999 |
| 2.06 | 0.9803 | 2.46 | 0.9931 | 2.86 | 0.9979 | 3.26 | 0.9994 | 3.66 | 0.9999 |
| 2.07 | 0.9808 | 2.47 | 0.9932 | 2.87 | 0.9979 | 3.27 | 0.9995 | 3.67 | 0.9999 |
| 2.08 | 0.9812 | 2.48 | 0.9934 | 2.88 | 0.9980 | 3.28 | 0.9995 | 3.68 | 0.9999 |
| 2.09 | 0.9817 | 2.49 | 0.9936 | 2.89 | 0.9981 | 3.29 | 0.9995 | 3.69 | 0.9999 |
| 2.10 | 0.9821 | 2.50 | 0.9938 | 2.90 | 0.9981 | 3.30 | 0.9995 | 3.70 | 0.9999 |
| 2.11 | 0.9826 | 2.51 | 0.9940 | 2.91 | 0.9982 | 3.31 | 0.9995 | 3.71 | 0.9999 |
| 2.12 | 0.9830 | 2.52 | 0.9941 | 2.92 | 0.9982 | 3.32 | 0.9995 | 3.72 | 0.9999 |
| 2.13 | 0.9834 | 2.53 | 0.9943 | 2.93 | 0.9983 | 3.33 | 0.9996 | 3.73 | 0.9999 |
| 2.14 | 0.9838 | 2.54 | 0.9945 | 2.94 | 0.9984 | 3.34 | 0.9996 | 3.74 | 0.9999 |
| 2.15 | 0.9842 | 2.55 | 0.9946 | 2.95 | 0.9984 | 3.35 | 0.9996 | 3.75 | 0.9999 |
| 2.16 | 0.9846 | 2.56 | 0.9948 | 2.96 | 0.9985 | 3.36 | 0.9996 | 3.76 | 0.9999 |
| 2.17 | 0.9850 | 2.57 | 0.9949 | 2.97 | 0.9985 | 3.37 | 0.9996 | 3.77 | 0.9999 |
| 2.18 | 0.9854 | 2.58 | 0.9951 | 2.98 | 0.9986 | 3.38 | 0.9996 | 3.78 | 0.9999 |
| 2.19 | 0.9857 | 2.59 | 0.9952 | 2.99 | 0.9986 | 3.39 | 0.9997 | 3.79 | 0.9999 |
| 2.20 | 0.9861 | 2.60 | 0.9953 | 3.00 | 0.9987 | 3.40 | 0.9997 | 3.80 | 0.9999 |
| 2.21 | 0.9864 | 2.61 | 0.9955 | 3.01 | 0.9987 | 3.41 | 0.9997 | 3.81 | 0.9999 |
| 2.22 | 0.9868 | 2.62 | 0.9956 | 3.02 | 0.9987 | 3.42 | 0.9997 | 3.82 | 0.9999 |
| 2.23 | 0.9871 | 2.63 | 0.9957 | 3.03 | 0.9988 | 3.43 | 0.9997 | 3.83 | 0.9999 |
| 2.24 | 0.9875 | 2.64 | 0.9959 | 3.04 | 0.9988 | 3.44 | 0.9997 | 3.84 | 0.9999 |
| 2.25 | 0.9878 | 2.65 | 0.9960 | 3.05 | 0.9989 | 3.45 | 0.9997 | 3.85 | 0.9999 |
| 2.26 | 0.9881 | 2.66 | 0.9961 | 3.06 | 0.9989 | 3.46 | 0.9997 | 3.86 | 0.9999 |
| 2.27 | 0.9884 | 2.67 | 0.9962 | 3.07 | 0.9989 | 3.47 | 0.9997 | 3.87 | 0.9999 |
| 2.28 | 0.9887 | 2.68 | 0.9963 | 3.08 | 0.9990 | 3.48 | 0.9997 | 3.88 | 0.9999 |
| 2.29 | 0.9890 | 2.69 | 0.9964 | 3.09 | 0.9990 | 3.49 | 0.9998 | 3.89 | 0.9999 |
| 2.30 | 0.9893 | 2.70 | 0.9965 | 3.10 | 0.9990 | 3.50 | 0.9998 | 3.90 | 1.0000 |
| 2.31 | 0.9896 | 2.71 | 0.9966 | 3.11 | 0.9991 | 3.51 | 0.9998 | 3.91 | 1.0000 |
| 2.32 | 0.9898 | 2.72 | 0.9967 | 3.12 | 0.9991 | 3.52 | 0.9998 | 3.92 | 1.0000 |
| 2.33 | 0.9901 | 2.73 | 0.9968 | 3.13 | 0.9991 | 3.53 | 0.9998 | 3.93 | 1.0000 |
| 2.34 | 0.9904 | 2.74 | 0.9969 | 3.14 | 0.9992 | 3.54 | 0.9998 | 3.94 | 1.0000 |
| 2.35 | 0.9906 | 2.75 | 0.9970 | 3.15 | 0.9992 | 3.55 | 0.9998 | 3.95 | 1.0000 |
| 2.36 | 0.9909 | 2.76 | 0.9971 | 3.16 | 0.9992 | 3.56 | 0.9998 | 3.96 | 1.0000 |
| 2.37 | 0.9911 | 2.77 | 0.9972 | 3.17 | 0.9992 | 3.57 | 0.9998 | 3.97 | 1.0000 |
| 2.38 | 0.9913 | 2.78 | 0.9973 | 3.18 | 0.9993 | 3.58 | 0.9998 | 3.98 | 1.0000 |
| 2.39 | 0.9916 | 2.79 | 0.9974 | 3.19 | 0.9993 | 3.59 | 0.9998 | 3.99 | 1.0000 |

**Tab. 2:** Kvantily $\chi^2_\alpha(n)$ Pearsonova $\chi^2(n)$ rozdělení.

| $n\backslash\alpha$ | 0.005 | 0.010 | 0.025 | 0.050 | 0.100 | 0.900 | 0.950 | 0.975 | 0.990 | 0.995 |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.000 | 0.000 | 0.001 | 0.004 | 0.016 | 2.706 | 3.842 | 5.024 | 6.635 | 7.879 |
| 2 | 0.010 | 0.020 | 0.051 | 0.103 | 0.211 | 4.605 | 5.992 | 7.378 | 9.210 | 10.60 |
| 3 | 0.072 | 0.115 | 0.216 | 0.352 | 0.584 | 6.251 | 7.815 | 9.348 | 11.35 | 12.84 |
| 4 | 0.207 | 0.297 | 0.484 | 0.711 | 1.064 | 7.779 | 9.488 | 11.14 | 13.28 | 14.86 |
| 5 | 0.412 | 0.554 | 0.831 | 1.145 | 1.610 | 9.236 | 11.07 | 12.83 | 15.09 | 16.75 |
| 6 | 0.676 | 0.872 | 1.237 | 1.635 | 2.204 | 10.65 | 12.59 | 14.45 | 16.81 | 18.55 |
| 7 | 0.989 | 1.239 | 1.690 | 2.167 | 2.833 | 12.02 | 14.07 | 16.01 | 18.48 | 20.28 |
| 8 | 1.344 | 1.646 | 2.180 | 2.733 | 3.490 | 13.36 | 15.51 | 17.54 | 20.09 | 21.95 |
| 9 | 1.735 | 2.088 | 2.700 | 3.325 | 4.168 | 14.68 | 16.92 | 19.02 | 21.67 | 23.59 |
| 10 | 2.156 | 2.558 | 3.247 | 3.940 | 4.865 | 15.99 | 18.31 | 20.48 | 23.21 | 25.19 |
| 11 | 2.603 | 3.053 | 3.816 | 4.575 | 5.578 | 17.27 | 19.68 | 21.92 | 24.73 | 26.76 |
| 12 | 3.074 | 3.571 | 4.404 | 5.226 | 6.304 | 18.55 | 21.03 | 23.34 | 26.22 | 28.30 |
| 13 | 3.565 | 4.107 | 5.009 | 5.892 | 7.042 | 19.81 | 22.36 | 24.74 | 27.69 | 29.82 |
| 14 | 4.075 | 4.660 | 5.629 | 6.571 | 7.790 | 21.06 | 23.68 | 26.12 | 29.14 | 31.32 |
| 15 | 4.601 | 5.229 | 6.262 | 7.261 | 8.547 | 22.31 | 25.00 | 27.49 | 30.58 | 32.80 |
| 16 | 5.142 | 5.812 | 6.908 | 7.962 | 9.312 | 23.54 | 26.30 | 28.84 | 32.00 | 34.27 |
| 17 | 5.697 | 6.408 | 7.564 | 8.672 | 10.09 | 24.77 | 27.59 | 30.19 | 33.41 | 35.72 |
| 18 | 6.265 | 7.015 | 8.231 | 9.391 | 10.87 | 25.99 | 28.87 | 31.53 | 34.81 | 37.16 |
| 19 | 6.844 | 7.633 | 8.907 | 10.12 | 11.65 | 27.20 | 30.14 | 32.85 | 36.19 | 38.58 |
| 20 | 7.434 | 8.260 | 9.591 | 10.85 | 12.44 | 28.41 | 31.41 | 34.17 | 37.57 | 40.00 |
| 21 | 8.034 | 8.897 | 10.28 | 11.59 | 13.24 | 29.61 | 32.67 | 35.48 | 38.93 | 41.40 |
| 22 | 8.643 | 9.543 | 10.98 | 12.34 | 14.04 | 30.81 | 33.92 | 36.78 | 40.29 | 42.80 |
| 23 | 9.260 | 10.20 | 11.69 | 13.09 | 14.85 | 32.01 | 35.17 | 38.08 | 41.64 | 44.18 |
| 24 | 9.887 | 10.86 | 12.40 | 13.85 | 15.66 | 33.20 | 36.41 | 39.36 | 42.98 | 45.56 |
| 25 | 10.52 | 11.52 | 13.12 | 14.61 | 16.47 | 34.38 | 37.65 | 40.65 | 44.31 | 46.93 |
| 26 | 11.16 | 12.20 | 13.84 | 15.38 | 17.29 | 35.56 | 38.88 | 41.92 | 45.64 | 48.29 |
| 27 | 11.81 | 12.88 | 14.57 | 16.15 | 18.11 | 36.74 | 40.11 | 43.20 | 46.96 | 49.65 |
| 28 | 12.46 | 13.57 | 15.31 | 16.93 | 18.94 | 37.92 | 41.34 | 44.46 | 48.28 | 50.99 |
| 29 | 13.12 | 14.26 | 16.05 | 17.71 | 19.77 | 39.09 | 42.56 | 45.72 | 49.59 | 52.34 |
| 30 | 13.79 | 14.95 | 16.79 | 18.49 | 20.60 | 40.26 | 43.77 | 46.98 | 50.89 | 53.67 |

**Tab. 3:** Kvantily $u_\alpha$ standardizovaného normálního rozdělení N(0,1).

| $\alpha$ | 0.900 | 0.950 | 0.975 | 0.990 | 0.995 |
|---|---|---|---|---|---|
| $u_\alpha$ | 1.282 | 1.645 | 1.960 | 2.326 | 2.576 |

**Tab. 4:** Kvantily $t_\alpha(n)$ Studentova $t(n)$ rozdělení.

| $n\backslash\alpha$ | 0.900 | 0.950 | 0.975 | 0.990 | 0.995 |
|---|---|---|---|---|---|
| 1 | 3.078 | 6.314 | 12.71 | 31.821 | 63.66 |
| 2 | 1.886 | 2.920 | 4.303 | 6.965 | 9.925 |
| 3 | 1.638 | 2.353 | 3.182 | 4.541 | 5.841 |
| 4 | 1.533 | 2.132 | 2.776 | 3.747 | 4.604 |
| 5 | 1.476 | 2.015 | 2.571 | 3.365 | 4.032 |
| 6 | 1.440 | 1.943 | 2.447 | 3.143 | 3.707 |
| 7 | 1.415 | 1.895 | 2.365 | 2.998 | 3.499 |
| 8 | 1.397 | 1.860 | 2.306 | 2.896 | 3.355 |
| 9 | 1.383 | 1.833 | 2.262 | 2.821 | 3.250 |
| 10 | 1.372 | 1.812 | 2.228 | 2.764 | 3.169 |
| 11 | 1.363 | 1.796 | 2.201 | 2.718 | 3.106 |
| 12 | 1.356 | 1.782 | 2.179 | 2.681 | 3.055 |
| 13 | 1.350 | 1.771 | 2.160 | 2.650 | 3.012 |
| 14 | 1.345 | 1.761 | 2.145 | 2.624 | 2.977 |
| 15 | 1.341 | 1.753 | 2.131 | 2.602 | 2.947 |
| 16 | 1.337 | 1.746 | 2.120 | 2.583 | 2.921 |
| 17 | 1.333 | 1.740 | 2.110 | 2.567 | 2.898 |
| 18 | 1.330 | 1.734 | 2.101 | 2.552 | 2.878 |
| 19 | 1.328 | 1.729 | 2.093 | 2.539 | 2.861 |
| 20 | 1.325 | 1.725 | 2.086 | 2.528 | 2.845 |
| 21 | 1.323 | 1.721 | 2.080 | 2.518 | 2.831 |
| 22 | 1.321 | 1.717 | 2.074 | 2.508 | 2.819 |
| 23 | 1.319 | 1.714 | 2.069 | 2.500 | 2.807 |
| 24 | 1.318 | 1.711 | 2.064 | 2.492 | 2.797 |
| 25 | 1.316 | 1.708 | 2.060 | 2.485 | 2.787 |
| 26 | 1.315 | 1.706 | 2.056 | 2.479 | 2.779 |
| 27 | 1.314 | 1.703 | 2.052 | 2.473 | 2.771 |
| 28 | 1.313 | 1.701 | 2.048 | 2.467 | 2.763 |
| 29 | 1.311 | 1.699 | 2.045 | 2.462 | 2.756 |
| 30 | 1.310 | 1.697 | 2.042 | 2.457 | 2.750 |
| $\infty$ | 1.282 | 1.645 | 1.960 | 2.326 | 2.576 |

Nechť $X_1, X_2, \ldots, X_n$ je náhodný výběr z rozdělení $\mathrm{N}(\mu, \sigma^2)$; $\alpha \in (0,1)$ dané číslo; $\alpha_1, \alpha_2$ nezáporná čísla: $\alpha_1 + \alpha_2 = \alpha$.
Potom $100(1-\alpha)\%$ intervalové odhady parametrů $\mu$ a $\sigma^2$ shrnuje následující tabulka:

| $\boldsymbol{\mu}$ | $\boldsymbol{\sigma^2}$ |
|---|---|
| $\left\langle \overline{X} - u_{1-\alpha_1} \cdot \frac{\sigma}{\sqrt{n}},\ \overline{X} + u_{1-\alpha_2} \cdot \frac{\sigma}{\sqrt{n}} \right\rangle$ | známe |
| známe | $\left\langle \frac{n \cdot S_0^2}{\chi^2_{1-\alpha_1}(n)},\ \frac{n \cdot S_0^2}{\chi^2_{\alpha_2}(n)} \right\rangle$ |
| $\left\langle \overline{X} - t_{1-\alpha_1}(n-1) \cdot \frac{S}{\sqrt{n}},\ \overline{X} + t_{1-\alpha_2}(n-1) \cdot \frac{S}{\sqrt{n}} \right\rangle$ | $\left\langle \frac{(n-1) \cdot S^2}{\chi^2_{1-\alpha_1}(n-1)},\ \frac{(n-1) \cdot S^2}{\chi^2_{\alpha_2}(n-1)} \right\rangle$ |

kde $u_\alpha$, $\chi^2_\alpha(n)$ a $t_\alpha(n-1)$ jsou postupně $100\alpha\%$ kvantily rozdělení N(0,1), $\chi^2$ rozdělení s $n$ stupni volnosti a $t$ rozdělení s $(n-1)$ stupni volnosti. $\overline{X}$ je odhad $\mu$ a $S_0^2$ (resp. $S^2$) je odhad $\sigma^2$ v případě, že $\mu$ známe (resp. neznáme).

Volba $\alpha_1, \alpha_2$:

1. $\alpha_1 = \alpha_2 = \frac{\alpha}{2}$ pro oboustranný intervalový odhad,
2. $\alpha_1 = \alpha, \alpha_2 = 0$ pro levostranný intervalový odhad,
3. $\alpha_1 = 0, \alpha_2 = \alpha$ pro pravostranný intervalový odhad.

---

Pearsonův test dobré shody na hladině významnosti $\alpha$:

$$T = \sum_{i=1}^{k} \frac{(n_i - np_i)^2}{np_i}; \quad W = \left(\chi^2_{1-\alpha}(k-m-1), \infty\right).$$

Podmínky použitelnosti:
1) $np_i \geq 5$ pro alespoň $80\,\%$ $i$,
2) $np_i \geq 1$ pro každé $i$.

---

Volba testovacího kritéria a kritického oboru pro testy hypotéz o parametrech rozdělení $\mathrm{N}(\mu,\sigma^2)$ na hladině významnosti $\alpha$:

| **Test $\mathbf{H_0}$ proti H** | | **Testovací kritérium** | **Kritický obor** |
|---|---|---|---|
| nulová hypotéza<br>$\mathrm{H}_0: \quad \mu = \mu_0$<br><br>alternativa<br>$\mathrm{H}_1: \quad \mu \neq \mu_0$<br>$\mathrm{H}_2: \quad \mu > \mu_0$<br>$\mathrm{H}_3: \quad \mu < \mu_0$ | $\sigma^2$ známé | $T = \dfrac{\overline{X} - \mu_0}{\sigma} \cdot \sqrt{n}$ | $W_1 = \left(-\infty, -u_{1-\frac{\alpha}{2}}\right) \cup \left(u_{1-\frac{\alpha}{2}}, \infty\right)$<br>$W_2 = \left(u_{1-\alpha}, \infty\right)$<br>$W_3 = \left(-\infty, -u_{1-\alpha}\right)$ |
| | $\sigma^2$ neznámé | $T = \dfrac{\overline{X} - \mu_0}{S} \cdot \sqrt{n}$ | $W_1 = \left(-\infty, -t_{1-\frac{\alpha}{2}}(n-1)\right) \cup \left(t_{1-\frac{\alpha}{2}}(n-1), \infty\right)$<br>$W_2 = \left(t_{1-\alpha}(n-1), \infty\right)$<br>$W_3 = \left(-\infty, -t_{1-\alpha}(n-1)\right)$ |
| nulová hypotéza<br>$\mathrm{H}_0: \quad \sigma^2 = \sigma_0^2$<br><br>alternativa<br>$\mathrm{H}_1: \quad \sigma^2 \neq \sigma_0^2$<br>$\mathrm{H}_2: \quad \sigma^2 > \sigma_0^2$<br>$\mathrm{H}_3: \quad \sigma^2 < \sigma_0^2$ | $\mu$ známé | $T = \dfrac{n \cdot S_0^2}{\sigma_0^2}$ | $W_1 = \left\langle 0, \chi^2_{\frac{\alpha}{2}}(n)\right) \cup \left(\chi^2_{1-\frac{\alpha}{2}}(n), \infty\right\rangle$<br>$W_2 = \left(\chi^2_{1-\alpha}(n), \infty\right)$<br>$W_3 = \left\langle 0, \chi^2_{\alpha}(n)\right)$ |
| | $\mu$ neznámé | $T = \dfrac{(n-1) \cdot S^2}{\sigma_0^2}$ | $W_1 = \left\langle 0, \chi^2_{\frac{\alpha}{2}}(n-1)\right) \cup \left(\chi^2_{1-\frac{\alpha}{2}}(n-1), \infty\right\rangle$<br>$W_2 = \left(\chi^2_{1-\alpha}(n-1), \infty\right)$<br>$W_3 = \left\langle 0, \chi^2_{\alpha}(n-1)\right)$ |

Testovací kritérium a kritický obor pro test hypotézy o parametru alternativního rozdělení $\mathrm{A}(\theta)$ na hladině významnosti $\alpha$:

| **Test $\mathbf{H_0}$ proti H** | **Testovací kritérium** | **Kritický obor** |
|---|---|---|
| nulová hypotéza<br>$\mathrm{H}_0: \quad \theta = \theta_0$<br><br>alternativa<br>$\mathrm{H}_1: \quad \theta \neq \theta_0$<br>$\mathrm{H}_2: \quad \theta > \theta_0$<br>$\mathrm{H}_3: \quad \theta < \theta_0$ | $T = \dfrac{\overline{X} - \theta_0}{\sqrt{\theta_0(1-\theta_0)}} \cdot \sqrt{n}$ | $W_1 = \left(-\infty, -u_{1-\frac{\alpha}{2}}\right) \cup \left(u_{1-\frac{\alpha}{2}}, \infty\right)$<br>$W_2 = (u_{1-\alpha}, \infty)$<br>$W_3 = (-\infty, -u_{1-\alpha})$ |