ТР 4.1 Математическая статистика

Дана выборка из 100 значений случайной величины *ξ* , распределенной либо по нормальному закону с па-

1 *−* (*x−m*)2

раметрами *m* и *σ* = 1 и плотностью распределения *f* (*x*) = *√*2*π e*

*√ √*1

2 (гипотеза *N* ), либо по закону Лапласа

*— √*2*|x−m|*

с параметрами *m* и *σ* = 2 и плотностью распределения *f* (*x*) = *e σ* (гипотеза *L*),где математическое

2*σ*

ожидание может принимать одно из трех значений : 1; 0; 1.

*−*

Выборка отсортирована.Студентам выдается вариационный ряд *ξ*1 *ξ*2 *. . . ξ*100. Требуется:

*≤ ≤ ≤*

1. Оценить параметры *m* и *σ* .В качестве оценок параметра *m* взять выборочное среднее *x*100 и выборочную медиану *mp* , а в качестве оценок параметра *σ* взять выборочное среднее квадратическое отклонение *S*100 и оценку *sp* =*ξ*100 *−ξ*1 .Указать к какому из значений *m* = 1; 0; 1 ближе всего находится оценка математического ожидания.Выбрать это значение в качестве *Mξ* .

5

*−*

1. По критерию "хи-квадрат"проверить гипотезы *N* и *L*.Выполнить интервальные группировки в услови- ях гипотез *N* и *L* ,разбивая всю числовую ось на десять интервалов,равновероятных в условиях проверяемой

гипотезы.Границы интервалов студентам выдаются.Вычислить значение статистики "хи-квадрат"по этим груп-

Σ

Σ

пировкам *KN*

10

=

*i*=1

(*ki* 10)2

10

*—* ,

*KL* =

10

*i*=1

(*li−*10)2 .Проверить гипотезы *N*

и *L* по критерию "хи-квадрат"при

следующих уровнях значимости *α*: 0*.*5; 0*.*2; 0*.*05; 0*.*025.

10

1. Построить гистограмму.
2. Выполнить интервальное оценивание случайной величины *ξ*.По всей выборке рассчитать доверительные интервалы для математического ожидания ,дисперсии и среднего квадратического отклонения при доверитель- ных вероятностях *β* = 0*.*7 и *β* = 0*.*95.Проверить принадлежность *m* и *σ*2 доверительным интервалам.

*Jm* = (*xn − tβ* *√Sn , xn* + *tβ √* *Sn* ),

*β*

*n*

*n*

*n*

*n*

*n*

*n*

*JD* = (*S*2 *− tβS*2q 2 *, S*2 + *tβS*2q 2 ).

ТР 4.1 Вариант 1

*β*

*n*

*n*

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| -2.17067 | -1.05647 | -0.74204 | -0.31786 | -0.05919 | 0.11844 | 0.32729 | 0.57786 | 0.73096 | 1.18916 |
| -1.87399 | -1.01063 | -0.69178 | -0.29589 | -0.04822 | 0.12533 | 0.38034 | 0.59128 | 0.78118 | 1.19084 |
| -1.66558 | -1.00912 | -0.64360 | -0.26561 | -0.03763 | 0.17464 | 0.38988 | 0.61446 | 0.79905 | 1.19092 |
| -1.60409 | -1.00776 | -0.63547 | -0.25565 | -0.01979 | 0.21204 | 0.42818 | 0.62323 | 0.81562 | 1.25400 |
| -1.59373 | -0.99209 | -0.58832 | -0.23400 | -0.01951 | 0.21932 | 0.44365 | 0.66860 | 0.85800 | 1.29025 |
| -1.47513 | -0.94990 | -0.55957 | -0.18671 | 0.00004 | 0.23788 | 0.50774 | 0.67709 | 0.89564 | 1.41514 |
| -1.44096 | -0.92190 | -0.43256 | -0.15672 | 0.04031 | 0.25730 | 0.52874 | 0.69000 | 0.94089 | 1.44351 |
| -1.33618 | -0.83235 | -0.39989 | -0.13640 | 0.05928 | 0.28768 | 0.56890 | 0.71191 | 1.06677 | 1.62356 |
| -1.20246 | -0.82171 | -0.37747 | -0.13150 | 0.08799 | 0.29441 | 0.56896 | 0.71432 | 1.08229 | 1.69243 |
| -1.14647 | -0.80509 | -0.35097 | -0.09565 | 0.11393 | 0.31481 | 0.57115 | 0.72579 | 1.09500 | 2.18319 |

Границы равновероятных интервалов для случайной величины с нулевым математическим ожиданием в условиях гипотез *N* и *L*:

*N* : *−*1*.*28155 *−* 0*.*84162 *−* 0*.*52440 *−* 0*.*25335 0*.*00000 0*.*25335 0*.*52440 0*.*84162 1*.*28155

*L* : *−*1*.*60944 *−* 0*.*91629 *−* 0*.*51083 *−* 0*.*22314 0*.*00000 0*.*22314 0*.*51083 0*.*91629 1*.*60944

ТР 4.1 Вариант 2

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| -4.17362 | -1.91394 | -0.70506 | -0.42088 | -0.18036 | 0.03313 | 0.30826 | 0.59934 | 1.08450 | 1.71837 |
| -3.45032 | -1.70669 | -0.64454 | -0.35378 | -0.13602 | 0.03961 | 0.36102 | 0.63897 | 1.14892 | 1.75814 |
| -2.67156 | -1.69320 | -0.63057 | -0.33055 | -0.07376 | 0.05536 | 0.36794 | 0.63951 | 1.17754 | 1.97237 |
| -2.36351 | -1.38338 | -0.61872 | -0.31378 | -0.06632 | 0.06124 | 0.41900 | 0.70666 | 1.17874 | 2.03551 |
| -2.35463 | -1.17948 | -0.60620 | -0.26549 | -0.04556 | 0.06134 | 0.44275 | 0.71912 | 1.33368 | 2.13673 |
| -2.30091 | -1.09957 | -0.59818 | -0.26526 | -0.02734 | 0.07754 | 0.44409 | 0.74030 | 1.46713 | 2.25884 |
| -2.23564 | -1.03099 | -0.59030 | -0.26360 | -0.01212 | 0.19596 | 0.46768 | 0.74317 | 1.50123 | 3.35528 |
| -2.11090 | -0.82572 | -0.55439 | -0.19339 | 0.00142 | 0.20117 | 0.47307 | 0.76140 | 1.58627 | 3.62250 |
| -2.01227 | -0.76273 | -0.48997 | -0.18538 | 0.00909 | 0.29987 | 0.51480 | 0.77742 | 1.65709 | 4.02155 |
| -1.92846 | -0.74329 | -0.44931 | -0.18392 | 0.02691 | 0.30553 | 0.58937 | 1.06605 | 1.70604 | 6.82687 |

Границы равновероятных интервалов для случайной величины с нулевым математическим ожиданием в условиях гипотез *N* и *L*:

*N* : *−*1*.*28155 *−* 0*.*84162 *−* 0*.*52440 *−* 0*.*25335 0*.*00000 0*.*25335 0*.*52440 0*.*84162 1*.*28155

*L* : *−*1*.*60944 *−* 0*.*91629 *−* 0*.*51083 *−* 0*.*22314 0*.*00000 0*.*22314 0*.*51083 0*.*91629 1*.*60944

ТР 4.1 Вариант 3

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| -1.20232 | -0.21732 | -0.02455 | 0.31834 | 0.57070 | 0.79631 | 1.03588 | 1.32737 | 1.70789 | 2.33959 |
| -1.05432 | -0.21315 | -0.02261 | 0.35485 | 0.61020 | 0.85033 | 1.05574 | 1.37096 | 1.72828 | 2.47248 |
| -0.58040 | -0.20131 | -0.00394 | 0.37247 | 0.62557 | 0.88013 | 1.05580 | 1.46938 | 1.80573 | 2.47892 |
| -0.38127 | -0.18778 | 0.01024 | 0.39352 | 0.63213 | 0.92067 | 1.12864 | 1.48530 | 1.93122 | 2.48849 |
| -0.35730 | -0.18589 | 0.05285 | 0.40451 | 0.66019 | 0.92134 | 1.13256 | 1.49777 | 1.95347 | 2.53515 |
| -0.34928 | -0.16782 | 0.09643 | 0.45352 | 0.66940 | 0.92707 | 1.23163 | 1.50454 | 1.98634 | 2.55324 |
| -0.34736 | -0.13978 | 0.14580 | 0.48136 | 0.73756 | 0.93471 | 1.23406 | 1.53540 | 2.01841 | 2.59294 |
| -0.31944 | -0.12834 | 0.15324 | 0.53503 | 0.73890 | 0.95877 | 1.28881 | 1.55288 | 2.03783 | 2.86453 |
| -0.29194 | -0.11621 | 0.15637 | 0.53939 | 0.75366 | 1.01124 | 1.28950 | 1.65647 | 2.13803 | 2.95738 |
| -0.23435 | -0.05590 | 0.31586 | 0.56525 | 0.78888 | 1.02147 | 1.31554 | 1.66302 | 2.19024 | 3.11216 |

Границы равновероятных интервалов для случайной величины с нулевым математическим ожиданием в условиях гипотез *N* и *L*:

*N* : *−*1*.*28155 *−* 0*.*84162 *−* 0*.*52440 *−* 0*.*25335 0*.*00000 0*.*25335 0*.*52440 0*.*84162 1*.*28155

*L* : *−*1*.*60944 *−* 0*.*91629 *−* 0*.*51083 *−* 0*.*22314 0*.*00000 0*.*22314 0*.*51083 0*.*91629 1*.*60944

ТР 4.1 Вариант 4

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| -4.11613 | -0.33797 | 0.08249 | 0.54599 | 0.84100 | 0.99948 | 1.27875 | 1.51821 | 2.04809 | 2.99032 |
| -1.92336 | -0.30852 | 0.09983 | 0.55137 | 0.87064 | 1.01198 | 1.28728 | 1.54411 | 2.15226 | 3.08582 |
| -1.86909 | -0.26005 | 0.14552 | 0.64196 | 0.89974 | 1.07139 | 1.29913 | 1.56110 | 2.17490 | 3.25354 |
| -1.71647 | -0.25863 | 0.15718 | 0.68622 | 0.90636 | 1.11560 | 1.30853 | 1.68634 | 2.21247 | 3.33032 |
| -0.95103 | -0.22056 | 0.26566 | 0.74075 | 0.92149 | 1.11911 | 1.36026 | 1.71680 | 2.27913 | 3.39503 |
| -0.70385 | -0.21637 | 0.29818 | 0.74569 | 0.92534 | 1.13903 | 1.36139 | 1.83542 | 2.47533 | 3.41599 |
| -0.69093 | -0.20174 | 0.30736 | 0.74978 | 0.94081 | 1.15468 | 1.36257 | 1.92839 | 2.48714 | 3.41707 |
| -0.37808 | -0.14089 | 0.31532 | 0.79854 | 0.95172 | 1.19161 | 1.44501 | 1.93177 | 2.52085 | 3.55349 |
| -0.37269 | -0.12579 | 0.31901 | 0.80231 | 0.97676 | 1.19872 | 1.45050 | 1.96204 | 2.62631 | 4.39950 |
| -0.34379 | -0.01669 | 0.40066 | 0.81197 | 0.99696 | 1.22413 | 1.47475 | 2.00819 | 2.70289 | 4.66091 |

Границы равновероятных интервалов для случайной величины с нулевым математическим ожиданием в условиях гипотез *N* и *L*:

*N* : *−*1*.*28155 *−* 0*.*84162 *−* 0*.*52440 *−* 0*.*25335 0*.*00000 0*.*25335 0*.*52440 0*.*84162 1*.*28155

*L* : *−*1*.*60944 *−* 0*.*91629 *−* 0*.*51083 *−* 0*.*22314 0*.*00000 0*.*22314 0*.*51083 0*.*91629 1*.*60944

ТР 4.1 Вариант 5

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| -3.36459 | -2.25659 | -1.80765 | -1.54782 | -1.25762 | -1.01318 | -0.89658 | -0.60342 | -0.33184 | 0.22745 |
| -3.32521 | -2.23164 | -1.78289 | -1.54121 | -1.25121 | -1.01179 | -0.82633 | -0.53795 | -0.31956 | 0.23656 |
| -3.12043 | -2.17456 | -1.71209 | -1.52256 | -1.24944 | -1.01129 | -0.78110 | -0.51986 | -0.11083 | 0.26978 |
| -3.00456 | -2.11904 | -1.70430 | -1.49309 | -1.24539 | -1.00501 | -0.75691 | -0.51450 | -0.08686 | 0.27645 |
| -2.66401 | -2.10707 | -1.70355 | -1.40167 | -1.18208 | -1.00082 | -0.73919 | -0.50017 | -0.05580 | 0.27808 |
| -2.66361 | -2.09984 | -1.69620 | -1.34718 | -1.13313 | -0.99248 | -0.73834 | -0.47536 | -0.00989 | 0.52101 |
| -2.51754 | -2.02898 | -1.64468 | -1.32100 | -1.11612 | -0.99027 | -0.71912 | -0.44882 | 0.05565 | 0.77010 |
| -2.40953 | -2.02114 | -1.63128 | -1.27622 | -1.11322 | -0.94406 | -0.68346 | -0.41306 | 0.06412 | 0.86340 |
| -2.33353 | -2.01814 | -1.60141 | -1.27467 | -1.07832 | -0.92863 | -0.67445 | -0.37965 | 0.07269 | 1.13631 |
| -2.27050 | -1.94137 | -1.58026 | -1.26401 | -1.03844 | -0.91401 | -0.62078 | -0.36473 | 0.21344 | 1.30929 |

ТР 4.1 Вариант 6

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| -7.73373 | -2.57568 | -1.86029 | -1.56551 | -1.16851 | -0.94873 | -0.59149 | -0.44340 | -0.10952 | 0.43973 |
| -7.34358 | -2.29861 | -1.85075 | -1.54709 | -1.12846 | -0.92220 | -0.58594 | -0.43562 | -0.08010 | 0.47868 |
| -4.78837 | -2.27873 | -1.84932 | -1.45971 | -1.12775 | -0.90800 | -0.55196 | -0.39364 | -0.04989 | 0.51430 |
| -4.26532 | -2.18023 | -1.84150 | -1.44886 | -1.11424 | -0.83343 | -0.54729 | -0.38475 | 0.02013 | 0.79137 |
| -3.18142 | -2.15372 | -1.82366 | -1.31428 | -1.10459 | -0.77433 | -0.54589 | -0.33945 | 0.06918 | 1.25465 |
| -3.03724 | -2.03913 | -1.76100 | -1.25148 | -1.07618 | -0.73512 | -0.51494 | -0.29502 | 0.07124 | 1.34674 |
| -2.81941 | -1.95803 | -1.71722 | -1.24884 | -1.06714 | -0.70005 | -0.50240 | -0.24920 | 0.11731 | 2.39536 |
| -2.81109 | -1.94692 | -1.66488 | -1.22780 | -1.02236 | -0.69757 | -0.50162 | -0.20879 | 0.31589 | 2.72447 |
| -2.66549 | -1.91852 | -1.61910 | -1.18867 | -0.97071 | -0.68958 | -0.46715 | -0.19317 | 0.34143 | 2.85022 |
| -2.59320 | -1.89032 | -1.57215 | -1.17979 | -0.97024 | -0.68606 | -0.45899 | -0.16129 | 0.39890 | 5.33865 |

Границы равновероятных интервалов для случайной величины с нулевым математическим ожиданием в условиях гипотез *N* и *L*:

*N* : *−*1*.*28155 *−* 0*.*84162 *−* 0*.*52440 *−* 0*.*25335 0*.*00000 0*.*25335 0*.*52440 0*.*84162 1*.*28155

*L* : *−*1*.*60944 *−* 0*.*91629 *−* 0*.*51083 *−* 0*.*22314 0*.*00000 0*.*22314 0*.*51083 0*.*91629 1*.*60944

ТР 4.1 Вариант 7

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| -2.44902 | -1.11872 | -0.75621 | -0.59110 | -0.27511 | -0.08913 | 0.13518 | 0.44091 | 0.83695 | 1.34093 |
| -2.00885 | -1.08106 | -0.72227 | -0.57353 | -0.26662 | -0.04773 | 0.22786 | 0.47329 | 1.05829 | 1.50853 |
| -1.94508 | -1.08066 | -0.72149 | -0.57233 | -0.21354 | -0.03598 | 0.22929 | 0.53622 | 1.08209 | 1.61975 |
| -1.75062 | -1.05403 | -0.71643 | -0.50616 | -0.20118 | -0.02046 | 0.27889 | 0.62167 | 1.08392 | 1.63507 |
| -1.70733 | -1.00261 | -0.68849 | -0.49990 | -0.19893 | -0.01543 | 0.30750 | 0.63634 | 1.10685 | 1.73568 |
| -1.68054 | -0.98119 | -0.67299 | -0.49773 | -0.18582 | 0.00893 | 0.31436 | 0.68563 | 1.18372 | 1.84822 |
| -1.25594 | -0.97765 | -0.66989 | -0.48759 | -0.18562 | 0.04120 | 0.32710 | 0.69735 | 1.28094 | 1.86248 |
| -1.22757 | -0.95727 | -0.65556 | -0.44681 | -0.17476 | 0.08090 | 0.37934 | 0.70167 | 1.29255 | 1.93746 |
| -1.16340 | -0.90924 | -0.65471 | -0.41286 | -0.14933 | 0.10681 | 0.38808 | 0.80765 | 1.31008 | 2.21255 |
| -1.12452 | -0.89604 | -0.63679 | -0.33036 | -0.13904 | 0.11695 | 0.39306 | 0.81149 | 1.33948 | 2.37265 |

Границы равновероятных интервалов для случайной величины с нулевым математическим ожиданием в условиях гипотез *N* и *L*:

*N* : *−*1*.*28155 *−* 0*.*84162 *−* 0*.*52440 *−* 0*.*25335 0*.*00000 0*.*25335 0*.*52440 0*.*84162 1*.*28155

*L* : *−*1*.*60944 *−* 0*.*91629 *−* 0*.*51083 *−* 0*.*22314 0*.*00000 0*.*22314 0*.*51083 0*.*91629 1*.*60944

ТР 4.1 Вариант 8

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| -4.76677 | -1.20135 | -0.62881 | -0.30180 | -0.11235 | 0.03766 | 0.18013 | 0.41581 | 0.58256 | 1.07434 |
| -4.36746 | -1.13476 | -0.60071 | -0.30049 | -0.09266 | 0.04669 | 0.18582 | 0.42094 | 0.61105 | 1.16459 |
| -3.50986 | -1.12894 | -0.58235 | -0.25937 | -0.08244 | 0.05366 | 0.19356 | 0.43460 | 0.65007 | 1.27458 |
| -3.11977 | -1.12036 | -0.58156 | -0.25404 | -0.08187 | 0.05879 | 0.19387 | 0.49110 | 0.67995 | 1.64301 |
| -2.01216 | -1.07190 | -0.47566 | -0.24915 | -0.04941 | 0.08048 | 0.21870 | 0.49653 | 0.70001 | 1.80603 |
| -1.85453 | -0.84014 | -0.45884 | -0.24075 | -0.02979 | 0.08711 | 0.23734 | 0.51027 | 0.70872 | 2.12299 |
| -1.83362 | -0.78962 | -0.45011 | -0.21857 | -0.00866 | 0.09217 | 0.29266 | 0.52084 | 0.74474 | 2.20279 |
| -1.44871 | -0.70630 | -0.44142 | -0.14885 | 0.02827 | 0.09681 | 0.33681 | 0.53426 | 0.83467 | 2.81630 |
| -1.30688 | -0.67758 | -0.41653 | -0.13599 | 0.03489 | 0.11409 | 0.38288 | 0.53726 | 0.98492 | 3.61212 |
| -1.25145 | -0.65839 | -0.37450 | -0.13550 | 0.03684 | 0.12067 | 0.38966 | 0.54238 | 1.00568 | 4.07844 |

ТР 4.1 Вариант 9

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| -1.52000 | -0.34541 | 0.16071 | 0.45798 | 0.64143 | 0.85645 | 1.10332 | 1.26850 | 1.63854 | 2.31984 |
| -1.42396 | -0.20899 | 0.16181 | 0.47152 | 0.72096 | 0.88301 | 1.13906 | 1.27920 | 1.65180 | 2.37328 |
| -1.37917 | -0.12635 | 0.18500 | 0.49192 | 0.76386 | 0.89280 | 1.14007 | 1.36661 | 1.67163 | 2.38078 |
| -1.30561 | -0.04734 | 0.21737 | 0.49879 | 0.77617 | 0.92454 | 1.16849 | 1.37573 | 1.74454 | 2.39334 |
| -1.07763 | -0.00806 | 0.23270 | 0.54581 | 0.77937 | 0.92846 | 1.17984 | 1.39080 | 1.75591 | 2.48188 |
| -0.91714 | 0.02294 | 0.26634 | 0.57539 | 0.79136 | 0.93547 | 1.22137 | 1.43443 | 1.82522 | 2.53567 |
| -0.86277 | 0.03601 | 0.29492 | 0.57908 | 0.79708 | 1.02032 | 1.22913 | 1.46994 | 1.85635 | 2.53741 |
| -0.53489 | 0.04050 | 0.33856 | 0.59402 | 0.81617 | 1.03274 | 1.23076 | 1.50816 | 1.94428 | 2.63419 |
| -0.51308 | 0.09057 | 0.34793 | 0.61648 | 0.83238 | 1.05539 | 1.24896 | 1.58486 | 2.25377 | 2.78873 |
| -0.37448 | 0.10950 | 0.41389 | 0.62287 | 0.85396 | 1.05807 | 1.25735 | 1.62498 | 2.27435 | 2.87045 |

Границы равновероятных интервалов для случайной величины с нулевым математическим ожиданием в условиях гипотез *N* и *L*:

*N* : *−*1*.*28155 *−* 0*.*84162 *−* 0*.*52440 *−* 0*.*25335 0*.*00000 0*.*25335 0*.*52440 0*.*84162 1*.*28155

*L* : *−*1*.*60944 *−* 0*.*91629 *−* 0*.*51083 *−* 0*.*22314 0*.*00000 0*.*22314 0*.*51083 0*.*91629 1*.*60944

ТР 4.1 Вариант 10

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| -4.70935 | -0.95708 | -0.13772 | 0.30747 | 0.66292 | 0.91043 | 1.11174 | 1.40198 | 1.64993 | 2.11600 |
| -3.40971 | -0.82818 | -0.04427 | 0.31294 | 0.67055 | 0.95459 | 1.13376 | 1.42130 | 1.69016 | 2.12764 |
| -2.97950 | -0.80173 | 0.02330 | 0.34227 | 0.70285 | 0.97909 | 1.16528 | 1.44420 | 1.72060 | 2.24613 |
| -1.83513 | -0.57217 | 0.13041 | 0.35990 | 0.70404 | 0.98842 | 1.16907 | 1.44993 | 1.73654 | 2.58879 |
| -1.82564 | -0.48126 | 0.18213 | 0.42121 | 0.71314 | 0.99991 | 1.22154 | 1.45151 | 1.77268 | 3.02542 |
| -1.64261 | -0.45611 | 0.18657 | 0.44118 | 0.71910 | 1.04080 | 1.24236 | 1.46554 | 1.77409 | 3.38659 |
| -1.62093 | -0.40644 | 0.20061 | 0.47920 | 0.83592 | 1.04282 | 1.25910 | 1.46973 | 1.80243 | 3.93168 |
| -1.29061 | -0.39726 | 0.22595 | 0.52251 | 0.85361 | 1.07530 | 1.26556 | 1.49383 | 1.98376 | 3.93203 |
| -1.20222 | -0.37886 | 0.23939 | 0.58804 | 0.88681 | 1.08860 | 1.36419 | 1.49639 | 1.99930 | 3.96626 |
| -1.16325 | -0.20190 | 0.28496 | 0.64709 | 0.89874 | 1.09866 | 1.36532 | 1.59335 | 2.10071 | 4.64070 |

Границы равновероятных интервалов для случайной величины с нулевым математическим ожиданием в условиях гипотез *N* и *L*:

*N* : *−*1*.*28155 *−* 0*.*84162 *−* 0*.*52440 *−* 0*.*25335 0*.*00000 0*.*25335 0*.*52440 0*.*84162 1*.*28155

*L* : *−*1*.*60944 *−* 0*.*91629 *−* 0*.*51083 *−* 0*.*22314 0*.*00000 0*.*22314 0*.*51083 0*.*91629 1*.*60944

ТР 4.1 Вариант 11

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| -3.63498 | -2.39139 | -1.88844 | -1.54270 | -1.29276 | -1.05035 | -0.77329 | -0.44698 | -0.24917 | 0.00163 |
| -3.41459 | -2.32350 | -1.87631 | -1.51726 | -1.27735 | -1.02593 | -0.76024 | -0.44524 | -0.24678 | 0.21591 |
| -2.69307 | -2.30056 | -1.80761 | -1.47091 | -1.26548 | -0.97195 | -0.75321 | -0.44146 | -0.23381 | 0.25937 |
| -2.49861 | -2.29368 | -1.78480 | -1.46134 | -1.24852 | -0.95585 | -0.75192 | -0.41995 | -0.20485 | 0.57752 |
| -2.48856 | -2.26312 | -1.75337 | -1.37453 | -1.17214 | -0.93501 | -0.71030 | -0.40146 | -0.13670 | 0.57830 |
| -2.44400 | -2.25842 | -1.69435 | -1.35088 | -1.14983 | -0.91718 | -0.68738 | -0.38766 | -0.10790 | 0.62197 |
| -2.43577 | -2.15825 | -1.66158 | -1.33595 | -1.14611 | -0.91650 | -0.67311 | -0.37356 | -0.08777 | 0.73817 |
| -2.42280 | -2.11063 | -1.60502 | -1.33077 | -1.10144 | -0.90819 | -0.67035 | -0.33335 | -0.07419 | 0.75130 |
| -2.40597 | -2.10817 | -1.57025 | -1.32758 | -1.07663 | -0.85282 | -0.49983 | -0.32061 | -0.06789 | 1.23685 |
| -2.39263 | -1.98652 | -1.55921 | -1.31414 | -1.07162 | -0.85143 | -0.45851 | -0.28081 | -0.00331 | 1.69028 |

ТР 4.1 Вариант 12

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| -6.04250 | -2.82009 | -2.10306 | -1.63994 | -1.29432 | -1.09415 | -0.94589 | -0.60045 | -0.23615 | 0.29933 |
| -4.32732 | -2.79474 | -2.07204 | -1.63066 | -1.26704 | -1.08390 | -0.94356 | -0.58805 | -0.21498 | 0.36167 |
| -3.49083 | -2.56094 | -2.07073 | -1.54553 | -1.25087 | -1.06669 | -0.91769 | -0.48987 | -0.10668 | 0.76055 |
| -3.40040 | -2.55889 | -1.98444 | -1.53625 | -1.21892 | -1.05682 | -0.83329 | -0.44986 | -0.10422 | 1.04394 |
| -3.35096 | -2.39555 | -1.88993 | -1.42395 | -1.17060 | -1.03215 | -0.79286 | -0.44297 | -0.07356 | 1.11570 |
| -3.23130 | -2.38674 | -1.83754 | -1.41838 | -1.16513 | -1.01747 | -0.76275 | -0.41347 | -0.07323 | 1.22645 |
| -3.09182 | -2.31648 | -1.76414 | -1.41723 | -1.16207 | -1.00686 | -0.76174 | -0.39690 | 0.05461 | 1.28587 |
| -3.05880 | -2.18211 | -1.73214 | -1.36387 | -1.12413 | -0.98049 | -0.72281 | -0.33340 | 0.10466 | 1.61663 |
| -3.03475 | -2.14095 | -1.71846 | -1.32273 | -1.12151 | -0.96394 | -0.69412 | -0.33016 | 0.11839 | 1.65502 |
| -2.96134 | -2.13891 | -1.67351 | -1.30500 | -1.11445 | -0.96090 | -0.60846 | -0.27331 | 0.14933 | 2.08698 |

Границы равновероятных интервалов для случайной величины с нулевым математическим ожиданием в условиях гипотез *N* и *L*:

*N* : *−*1*.*28155 *−* 0*.*84162 *−* 0*.*52440 *−* 0*.*25335 0*.*00000 0*.*25335 0*.*52440 0*.*84162 1*.*28155

*L* : *−*1*.*60944 *−* 0*.*91629 *−* 0*.*51083 *−* 0*.*22314 0*.*00000 0*.*22314 0*.*51083 0*.*91629 1*.*60944

ТР 4.1 Вариант 13

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| -2.24758 | -1.02326 | -0.75225 | -0.38237 | -0.13113 | 0.07547 | 0.24858 | 0.59363 | 0.80616 | 1.22962 |
| -1.72577 | -0.95337 | -0.71070 | -0.33514 | -0.11369 | 0.08015 | 0.24924 | 0.59875 | 0.81320 | 1.23524 |
| -1.70105 | -0.95296 | -0.68548 | -0.32245 | -0.08946 | 0.10245 | 0.32529 | 0.63574 | 0.81796 | 1.36427 |
| -1.60331 | -0.93730 | -0.68039 | -0.31567 | -0.08603 | 0.10525 | 0.33937 | 0.67227 | 0.87091 | 1.38363 |
| -1.28819 | -0.85953 | -0.60803 | -0.26839 | -0.04101 | 0.12794 | 0.36920 | 0.70234 | 0.91110 | 1.44187 |
| -1.18835 | -0.81623 | -0.57853 | -0.23861 | -0.03728 | 0.13866 | 0.43161 | 0.72286 | 0.93754 | 1.54128 |
| -1.16950 | -0.79941 | -0.52663 | -0.23127 | -0.00633 | 0.17920 | 0.44266 | 0.75200 | 0.97785 | 1.55194 |
| -1.13172 | -0.78707 | -0.51078 | -0.19476 | 0.01829 | 0.20176 | 0.48204 | 0.76286 | 1.06544 | 1.68203 |
| -1.07409 | -0.76371 | -0.50154 | -0.16689 | 0.03000 | 0.21713 | 0.48519 | 0.77817 | 1.14177 | 2.09407 |
| -1.03374 | -0.75809 | -0.44377 | -0.15858 | 0.03950 | 0.23358 | 0.52449 | 0.79015 | 1.15075 | 2.17643 |

Границы равновероятных интервалов для случайной величины с нулевым математическим ожиданием в условиях гипотез *N* и *L*:

*N* : *−*1*.*28155 *−* 0*.*84162 *−* 0*.*52440 *−* 0*.*25335 0*.*00000 0*.*25335 0*.*52440 0*.*84162 1*.*28155

*L* : *−*1*.*60944 *−* 0*.*91629 *−* 0*.*51083 *−* 0*.*22314 0*.*00000 0*.*22314 0*.*51083 0*.*91629 1*.*60944

ТР 4.1 Вариант 14

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| -3.10532 | -1.63545 | -0.89373 | -0.36854 | -0.01854 | 0.07586 | 0.20233 | 0.50571 | 0.99645 | 1.90385 |
| -3.08787 | -1.51395 | -0.81864 | -0.27875 | -0.01080 | 0.08672 | 0.22725 | 0.50603 | 1.02909 | 1.95404 |
| -2.94353 | -1.26790 | -0.81348 | -0.27414 | -0.00980 | 0.10256 | 0.25035 | 0.50980 | 1.03784 | 1.96180 |
| -2.76022 | -1.21476 | -0.76753 | -0.21423 | 0.01201 | 0.13121 | 0.32718 | 0.53260 | 1.08623 | 1.99385 |
| -2.68112 | -1.16852 | -0.76526 | -0.14979 | 0.03440 | 0.15451 | 0.40661 | 0.55016 | 1.20752 | 2.21184 |
| -2.49921 | -1.14435 | -0.64711 | -0.14939 | 0.03827 | 0.15737 | 0.40937 | 0.55755 | 1.25090 | 2.71537 |
| -2.02056 | -1.13060 | -0.60422 | -0.13675 | 0.03937 | 0.16101 | 0.41852 | 0.59361 | 1.28148 | 3.04138 |
| -1.86660 | -1.09474 | -0.47287 | -0.11761 | 0.03944 | 0.18878 | 0.42932 | 0.64312 | 1.32813 | 3.08953 |
| -1.72605 | -0.95720 | -0.41679 | -0.06598 | 0.04871 | 0.19574 | 0.48053 | 0.70592 | 1.82308 | 3.67496 |
| -1.64467 | -0.91307 | -0.37509 | -0.06294 | 0.06492 | 0.19799 | 0.48168 | 0.74378 | 1.84665 | 5.33855 |

ТР 4.1 Вариант 15

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| -1.64422 | -0.44267 | 0.05591 | 0.41746 | 0.85964 | 1.10954 | 1.28543 | 1.47951 | 1.77479 | 2.06380 |
| -1.06392 | -0.34105 | 0.09051 | 0.47830 | 0.92802 | 1.11091 | 1.28687 | 1.49950 | 1.80754 | 2.19110 |
| -1.02508 | -0.30686 | 0.10365 | 0.48921 | 0.96321 | 1.13188 | 1.29378 | 1.50803 | 1.81211 | 2.23150 |
| -0.95421 | -0.22764 | 0.10529 | 0.48937 | 0.97312 | 1.16198 | 1.31351 | 1.52899 | 1.82609 | 2.26308 |
| -0.81889 | -0.13034 | 0.12988 | 0.62654 | 0.98694 | 1.17328 | 1.34347 | 1.53299 | 1.84790 | 2.30595 |
| -0.72349 | -0.08357 | 0.16797 | 0.70746 | 0.99188 | 1.17358 | 1.35435 | 1.68524 | 1.85844 | 2.43196 |
| -0.65455 | -0.05202 | 0.17010 | 0.72490 | 0.99442 | 1.18229 | 1.36211 | 1.68679 | 1.88217 | 2.48761 |
| -0.63397 | 0.00960 | 0.39327 | 0.75668 | 1.02005 | 1.23492 | 1.38381 | 1.74351 | 1.92321 | 3.01567 |
| -0.57305 | 0.01715 | 0.39957 | 0.82145 | 1.02077 | 1.24860 | 1.41108 | 1.75530 | 1.95856 | 3.62891 |
| -0.48966 | 0.02513 | 0.40217 | 0.83956 | 1.05300 | 1.28010 | 1.41944 | 1.77121 | 2.03285 | 3.73164 |

Границы равновероятных интервалов для случайной величины с нулевым математическим ожиданием в условиях гипотез *N* и *L*:

*N* : *−*1*.*28155 *−* 0*.*84162 *−* 0*.*52440 *−* 0*.*25335 0*.*00000 0*.*25335 0*.*52440 0*.*84162 1*.*28155

*L* : *−*1*.*60944 *−* 0*.*91629 *−* 0*.*51083 *−* 0*.*22314 0*.*00000 0*.*22314 0*.*51083 0*.*91629 1*.*60944

ТР 4.1 Вариант 16

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| -3.64275 | -0.53490 | 0.22464 | 0.51655 | 0.81004 | 0.97335 | 1.10943 | 1.45096 | 1.83472 | 2.58628 |
| -1.76768 | -0.47426 | 0.24669 | 0.55572 | 0.81722 | 0.98355 | 1.15652 | 1.50086 | 1.93276 | 2.60466 |
| -1.75966 | -0.40283 | 0.28723 | 0.58678 | 0.83544 | 1.00456 | 1.15825 | 1.51910 | 1.94116 | 2.62169 |
| -1.65756 | -0.24699 | 0.31253 | 0.60994 | 0.86416 | 1.01373 | 1.21609 | 1.52212 | 1.99110 | 2.82625 |
| -1.27076 | -0.20898 | 0.40345 | 0.62771 | 0.87504 | 1.02665 | 1.21685 | 1.54628 | 2.02821 | 2.83574 |
| -1.19631 | -0.19589 | 0.40813 | 0.69183 | 0.87515 | 1.04513 | 1.23709 | 1.62125 | 2.26419 | 3.04410 |
| -1.15895 | -0.14206 | 0.41012 | 0.72716 | 0.93408 | 1.04545 | 1.25131 | 1.72411 | 2.28462 | 3.05472 |
| -1.11789 | -0.12575 | 0.41635 | 0.73334 | 0.95873 | 1.05639 | 1.35704 | 1.76003 | 2.30644 | 3.09158 |
| -0.61078 | -0.07414 | 0.42055 | 0.79553 | 0.97013 | 1.06292 | 1.36038 | 1.77673 | 2.34319 | 3.35243 |
| -0.54009 | 0.09604 | 0.47934 | 0.80702 | 0.97300 | 1.07085 | 1.36101 | 1.78540 | 2.45848 | 3.96998 |

Границы равновероятных интервалов для случайной величины с нулевым математическим ожиданием в условиях гипотез *N* и *L*:

*N* : *−*1*.*28155 *−* 0*.*84162 *−* 0*.*52440 *−* 0*.*25335 0*.*00000 0*.*25335 0*.*52440 0*.*84162 1*.*28155

*L* : *−*1*.*60944 *−* 0*.*91629 *−* 0*.*51083 *−* 0*.*22314 0*.*00000 0*.*22314 0*.*51083 0*.*91629 1*.*60944

ТР 4.1 Вариант 17

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| -3.27724 | -2.10970 | -1.69194 | -1.28767 | -0.96295 | -0.75504 | -0.61453 | -0.31982 | -0.11715 | 0.13428 |
| -3.12309 | -2.07254 | -1.68587 | -1.26402 | -0.93821 | -0.74244 | -0.60141 | -0.29976 | -0.11225 | 0.16483 |
| -2.72914 | -2.02514 | -1.61497 | -1.22218 | -0.93105 | -0.71575 | -0.59377 | -0.27922 | -0.10023 | 0.21598 |
| -2.71291 | -1.99772 | -1.58086 | -1.17936 | -0.87911 | -0.71529 | -0.54257 | -0.24181 | -0.03623 | 0.31705 |
| -2.66501 | -1.92601 | -1.50497 | -1.14970 | -0.84816 | -0.71084 | -0.44584 | -0.24006 | -0.03477 | 0.32192 |
| -2.60985 | -1.90140 | -1.47535 | -1.14554 | -0.83502 | -0.71011 | -0.42827 | -0.19427 | -0.02924 | 0.39535 |
| -2.46707 | -1.85095 | -1.41747 | -1.11192 | -0.82813 | -0.70858 | -0.41165 | -0.18812 | 0.01349 | 0.44842 |
| -2.42964 | -1.80303 | -1.41517 | -1.10724 | -0.80099 | -0.66832 | -0.41112 | -0.18170 | 0.10708 | 0.53702 |
| -2.37177 | -1.77338 | -1.33684 | -1.08965 | -0.79458 | -0.66098 | -0.37955 | -0.15118 | 0.10953 | 1.08073 |
| -2.35564 | -1.73332 | -1.30014 | -1.06434 | -0.77198 | -0.66064 | -0.33774 | -0.14405 | 0.11633 | 1.49532 |

ТР 4.1 Вариант 18

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| -4.95202 | -2.35107 | -1.74061 | -1.28969 | -1.18201 | -1.02743 | -0.70222 | -0.49560 | -0.08852 | 0.42016 |
| -2.92594 | -2.24965 | -1.53948 | -1.28140 | -1.17426 | -1.00274 | -0.68473 | -0.46013 | -0.02239 | 0.43367 |
| -2.91717 | -2.23858 | -1.51042 | -1.28108 | -1.15345 | -1.00069 | -0.67411 | -0.45488 | -0.01625 | 0.57527 |
| -2.87312 | -2.22966 | -1.40255 | -1.26836 | -1.15205 | -0.94729 | -0.65780 | -0.42403 | 0.01903 | 0.70035 |
| -2.82856 | -2.21209 | -1.39131 | -1.26757 | -1.14415 | -0.86621 | -0.65329 | -0.34315 | 0.09946 | 1.00758 |
| -2.71643 | -2.13302 | -1.38826 | -1.25059 | -1.12722 | -0.83588 | -0.58389 | -0.33398 | 0.19917 | 1.11812 |
| -2.64581 | -1.96996 | -1.33499 | -1.24974 | -1.10373 | -0.82597 | -0.57016 | -0.31027 | 0.26736 | 1.60803 |
| -2.51396 | -1.93493 | -1.33023 | -1.24599 | -1.04575 | -0.81204 | -0.54996 | -0.22625 | 0.41216 | 1.89956 |
| -2.48660 | -1.92594 | -1.32186 | -1.21632 | -1.04128 | -0.80917 | -0.52975 | -0.11626 | 0.41398 | 2.03160 |
| -2.41272 | -1.74226 | -1.30597 | -1.20291 | -1.03279 | -0.77652 | -0.51032 | -0.11192 | 0.41931 | 3.68868 |

Границы равновероятных интервалов для случайной величины с нулевым математическим ожиданием в условиях гипотез *N* и *L*:

*N* : *−*1*.*28155 *−* 0*.*84162 *−* 0*.*52440 *−* 0*.*25335 0*.*00000 0*.*25335 0*.*52440 0*.*84162 1*.*28155

*L* : *−*1*.*60944 *−* 0*.*91629 *−* 0*.*51083 *−* 0*.*22314 0*.*00000 0*.*22314 0*.*51083 0*.*91629 1*.*60944

ТР 4.1 Вариант 19

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| -2.23738 | -1.41386 | -1.00607 | -0.68312 | -0.41822 | -0.20667 | 0.20740 | 0.42871 | 0.62938 | 1.09429 |
| -2.10529 | -1.38417 | -0.87091 | -0.66462 | -0.40053 | -0.12648 | 0.21372 | 0.44084 | 0.65479 | 1.09764 |
| -1.75800 | -1.24839 | -0.85328 | -0.60221 | -0.38429 | -0.02104 | 0.22094 | 0.44191 | 0.70903 | 1.25906 |
| -1.64661 | -1.22873 | -0.79763 | -0.59754 | -0.36094 | -0.00162 | 0.22842 | 0.46027 | 0.79878 | 1.32417 |
| -1.61915 | -1.18854 | -0.77548 | -0.52162 | -0.34724 | 0.03272 | 0.22886 | 0.49378 | 0.83387 | 1.39945 |
| -1.61457 | -1.13304 | -0.74790 | -0.48181 | -0.31352 | 0.06494 | 0.27104 | 0.55356 | 0.85848 | 1.42740 |
| -1.59024 | -1.07760 | -0.73723 | -0.46196 | -0.30122 | 0.06962 | 0.32682 | 0.55818 | 0.89682 | 1.53498 |
| -1.58859 | -1.05228 | -0.73716 | -0.45792 | -0.29147 | 0.07983 | 0.32740 | 0.56493 | 0.91176 | 1.68675 |
| -1.55638 | -1.01333 | -0.70142 | -0.45307 | -0.27786 | 0.10976 | 0.34563 | 0.56538 | 0.98337 | 1.72948 |
| -1.49976 | -1.00820 | -0.69362 | -0.42557 | -0.22350 | 0.13789 | 0.37985 | 0.62556 | 1.00222 | 1.76212 |

Границы равновероятных интервалов для случайной величины с нулевым математическим ожиданием в условиях гипотез *N* и *L*:

*N* : *−*1*.*28155 *−* 0*.*84162 *−* 0*.*52440 *−* 0*.*25335 0*.*00000 0*.*25335 0*.*52440 0*.*84162 1*.*28155

*L* : *−*1*.*60944 *−* 0*.*91629 *−* 0*.*51083 *−* 0*.*22314 0*.*00000 0*.*22314 0*.*51083 0*.*91629 1*.*60944

ТР 4.1 Вариант 20

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| -4.49395 | -1.37806 | -0.63815 | -0.37264 | -0.16829 | 0.07230 | 0.29526 | 0.57681 | 1.10679 | 1.84300 |
| -3.76960 | -1.33923 | -0.59179 | -0.35802 | -0.12246 | 0.07463 | 0.31367 | 0.57909 | 1.11703 | 1.85116 |
| -3.27460 | -1.24381 | -0.58413 | -0.33540 | -0.11687 | 0.12991 | 0.33695 | 0.61785 | 1.12136 | 1.96454 |
| -2.32898 | -1.16557 | -0.54938 | -0.30370 | -0.08764 | 0.14198 | 0.38153 | 0.68641 | 1.13662 | 2.02662 |
| -2.30172 | -1.01503 | -0.54129 | -0.29207 | -0.07675 | 0.17742 | 0.38533 | 0.71685 | 1.15229 | 2.14437 |
| -2.29300 | -0.94326 | -0.53429 | -0.28285 | -0.07256 | 0.19704 | 0.39421 | 0.89102 | 1.23351 | 2.19736 |
| -1.91257 | -0.90412 | -0.46299 | -0.26931 | 0.02961 | 0.19957 | 0.39794 | 1.01119 | 1.30322 | 2.33828 |
| -1.56466 | -0.76832 | -0.44438 | -0.20878 | 0.03362 | 0.21301 | 0.40140 | 1.08781 | 1.34085 | 2.59121 |
| -1.45040 | -0.72061 | -0.43563 | -0.18498 | 0.04724 | 0.21498 | 0.40339 | 1.09888 | 1.48479 | 2.74026 |
| -1.39118 | -0.70533 | -0.40668 | -0.18391 | 0.05378 | 0.22878 | 0.40603 | 1.10050 | 1.80749 | 3.32604 |

ТР 4.1 Вариант 21

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| -2.02912 | -0.50367 | 0.09202 | 0.44685 | 0.72489 | 0.97698 | 1.32065 | 1.58909 | 2.00790 | 2.57408 |
| -1.23783 | -0.37185 | 0.09892 | 0.46663 | 0.73374 | 1.00252 | 1.37352 | 1.61282 | 2.05007 | 2.58230 |
| -1.17757 | -0.26766 | 0.10505 | 0.48335 | 0.74235 | 1.15849 | 1.44803 | 1.65881 | 2.16359 | 2.58388 |
| -1.08895 | -0.22661 | 0.10745 | 0.50875 | 0.79419 | 1.17618 | 1.52784 | 1.66532 | 2.22780 | 2.59865 |
| -1.06474 | -0.16131 | 0.23283 | 0.58253 | 0.81032 | 1.21758 | 1.54058 | 1.71597 | 2.27854 | 2.60346 |
| -0.91024 | -0.10984 | 0.25419 | 0.60238 | 0.82568 | 1.23700 | 1.56348 | 1.85661 | 2.29291 | 2.84263 |
| -0.77942 | -0.04366 | 0.25637 | 0.62154 | 0.84042 | 1.27872 | 1.57359 | 1.88464 | 2.31477 | 2.95652 |
| -0.63128 | -0.00900 | 0.26459 | 0.62604 | 0.84862 | 1.29067 | 1.57427 | 1.90153 | 2.34370 | 3.23804 |
| -0.61424 | 0.02091 | 0.29672 | 0.64086 | 0.87154 | 1.29828 | 1.58121 | 1.90805 | 2.34797 | 3.26633 |
| -0.55009 | 0.08946 | 0.41307 | 0.69829 | 0.94970 | 1.31576 | 1.58245 | 1.95696 | 2.35612 | 3.94955 |

Границы равновероятных интервалов для случайной величины с нулевым математическим ожиданием в условиях гипотез *N* и *L*:

*N* : *−*1*.*28155 *−* 0*.*84162 *−* 0*.*52440 *−* 0*.*25335 0*.*00000 0*.*25335 0*.*52440 0*.*84162 1*.*28155

*L* : *−*1*.*60944 *−* 0*.*91629 *−* 0*.*51083 *−* 0*.*22314 0*.*00000 0*.*22314 0*.*51083 0*.*91629 1*.*60944

ТР 4.1 Вариант 22

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| -8.42787 | -0.44056 | 0.06441 | 0.41837 | 0.75552 | 1.01017 | 1.28301 | 1.42052 | 1.87699 | 2.35700 |
| -3.26756 | -0.39882 | 0.08977 | 0.42808 | 0.78870 | 1.05436 | 1.29774 | 1.43407 | 2.04769 | 2.48290 |
| -2.09859 | -0.36973 | 0.09938 | 0.46246 | 0.85959 | 1.14929 | 1.33233 | 1.47351 | 2.08528 | 2.56757 |
| -1.74049 | -0.35446 | 0.16718 | 0.61976 | 0.86588 | 1.15876 | 1.35119 | 1.48105 | 2.10433 | 2.58226 |
| -1.71799 | -0.29395 | 0.19568 | 0.64667 | 0.87811 | 1.16098 | 1.37364 | 1.50962 | 2.11472 | 2.64048 |
| -1.29475 | -0.15738 | 0.27846 | 0.64730 | 0.90469 | 1.16589 | 1.38986 | 1.57698 | 2.13121 | 3.24658 |
| -1.12093 | -0.12112 | 0.28379 | 0.67418 | 0.95281 | 1.17284 | 1.40456 | 1.60993 | 2.19531 | 3.37005 |
| -0.69499 | -0.08406 | 0.36384 | 0.70116 | 0.96276 | 1.17666 | 1.40751 | 1.67126 | 2.19778 | 3.52710 |
| -0.55531 | -0.04174 | 0.39282 | 0.74306 | 0.97409 | 1.20865 | 1.41220 | 1.81943 | 2.23844 | 3.56229 |
| -0.46442 | 0.02172 | 0.41152 | 0.75536 | 1.00371 | 1.22917 | 1.41962 | 1.83229 | 2.25285 | 5.18903 |

Границы равновероятных интервалов для случайной величины с нулевым математическим ожиданием в условиях гипотез *N* и *L*:

*N* : *−*1*.*28155 *−* 0*.*84162 *−* 0*.*52440 *−* 0*.*25335 0*.*00000 0*.*25335 0*.*52440 0*.*84162 1*.*28155

*L* : *−*1*.*60944 *−* 0*.*91629 *−* 0*.*51083 *−* 0*.*22314 0*.*00000 0*.*22314 0*.*51083 0*.*91629 1*.*60944

ТР 4.1 Вариант 23

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| -3.55661 | -2.41561 | -1.92415 | -1.64966 | -1.29926 | -1.07285 | -0.78613 | -0.53660 | -0.14043 | 0.11276 |
| -3.53386 | -2.40436 | -1.84911 | -1.64241 | -1.28339 | -1.04856 | -0.77288 | -0.52163 | -0.13667 | 0.23325 |
| -3.37894 | -2.38767 | -1.80128 | -1.61094 | -1.26568 | -1.00760 | -0.76406 | -0.44074 | -0.12967 | 0.29412 |
| -3.33425 | -2.35754 | -1.80096 | -1.53495 | -1.25166 | -0.98343 | -0.74415 | -0.37711 | -0.11324 | 0.34199 |
| -2.81569 | -2.33511 | -1.79654 | -1.44278 | -1.19173 | -0.92229 | -0.71503 | -0.34933 | -0.06119 | 0.46933 |
| -2.79487 | -2.33294 | -1.72681 | -1.40819 | -1.19083 | -0.88047 | -0.70603 | -0.34121 | 0.00887 | 0.49462 |
| -2.66421 | -2.29844 | -1.72398 | -1.39464 | -1.14385 | -0.87133 | -0.69058 | -0.33999 | 0.03534 | 0.68429 |
| -2.64314 | -2.14990 | -1.71972 | -1.36488 | -1.14211 | -0.80223 | -0.68542 | -0.30015 | 0.04769 | 0.95791 |
| -2.56670 | -2.09079 | -1.67938 | -1.34628 | -1.07961 | -0.80156 | -0.63351 | -0.26989 | 0.05183 | 1.08006 |
| -2.49090 | -2.05681 | -1.66360 | -1.33922 | -1.07906 | -0.79203 | -0.56080 | -0.24224 | 0.10842 | 2.20252 |

ТР 4.1 Вариант 24

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| -4.33625 | -2.47747 | -2.15493 | -1.78751 | -1.37564 | -1.23965 | -0.83547 | -0.32830 | -0.11917 | 0.56030 |
| -4.31038 | -2.47378 | -2.11109 | -1.75640 | -1.36849 | -1.22511 | -0.75552 | -0.31494 | -0.07785 | 0.69117 |
| -3.71576 | -2.42565 | -2.07904 | -1.68536 | -1.35909 | -1.16227 | -0.74625 | -0.30617 | -0.03702 | 0.76455 |
| -3.39645 | -2.40878 | -1.92878 | -1.66349 | -1.35081 | -1.14173 | -0.73457 | -0.30475 | 0.00685 | 0.82162 |
| -3.11590 | -2.37894 | -1.92684 | -1.64679 | -1.35008 | -1.13840 | -0.70924 | -0.24895 | 0.07718 | 0.94530 |
| -2.95263 | -2.37808 | -1.90230 | -1.63003 | -1.33874 | -1.08575 | -0.66387 | -0.20945 | 0.08798 | 0.95647 |
| -2.92164 | -2.35008 | -1.87648 | -1.57432 | -1.32244 | -1.03656 | -0.63001 | -0.19528 | 0.16604 | 1.15536 |
| -2.82442 | -2.32206 | -1.85065 | -1.57106 | -1.29126 | -1.01350 | -0.54130 | -0.19517 | 0.23262 | 1.19270 |
| -2.81614 | -2.26458 | -1.84903 | -1.46328 | -1.27279 | -0.93058 | -0.49528 | -0.15384 | 0.23514 | 1.61029 |
| -2.55076 | -2.18703 | -1.84374 | -1.41161 | -1.26811 | -0.84477 | -0.38388 | -0.12705 | 0.40892 | 4.98005 |

Границы равновероятных интервалов для случайной величины с нулевым математическим ожиданием в условиях гипотез *N* и *L*:

*N* : *−*1*.*28155 *−* 0*.*84162 *−* 0*.*52440 *−* 0*.*25335 0*.*00000 0*.*25335 0*.*52440 0*.*84162 1*.*28155

*L* : *−*1*.*60944 *−* 0*.*91629 *−* 0*.*51083 *−* 0*.*22314 0*.*00000 0*.*22314 0*.*51083 0*.*91629 1*.*60944

ТР 4.1 Вариант 25

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| -1.96682 | -1.31614 | -0.86743 | -0.56079 | -0.37810 | -0.10795 | 0.13073 | 0.42688 | 0.67215 | 1.29509 |
| -1.90613 | -1.30992 | -0.84429 | -0.55845 | -0.30281 | -0.09636 | 0.17509 | 0.42878 | 0.69696 | 1.45480 |
| -1.88839 | -1.24089 | -0.81380 | -0.54602 | -0.29582 | -0.09578 | 0.17930 | 0.42904 | 0.69714 | 1.47664 |
| -1.84020 | -1.19912 | -0.77151 | -0.52550 | -0.21998 | -0.07280 | 0.17954 | 0.42949 | 0.70000 | 1.55038 |
| -1.73776 | -1.17379 | -0.74736 | -0.51019 | -0.19375 | -0.06529 | 0.20615 | 0.44582 | 0.71770 | 1.67768 |
| -1.62820 | -1.04415 | -0.67263 | -0.47423 | -0.18605 | -0.03081 | 0.22242 | 0.48403 | 0.90771 | 1.87132 |
| -1.54793 | -0.99431 | -0.65763 | -0.44952 | -0.16800 | -0.00812 | 0.22943 | 0.50055 | 0.94724 | 1.88608 |
| -1.41440 | -0.94339 | -0.59902 | -0.41541 | -0.16031 | -0.00666 | 0.36305 | 0.51124 | 0.98835 | 1.99695 |
| -1.40757 | -0.90236 | -0.56957 | -0.41134 | -0.15480 | 0.02004 | 0.41053 | 0.51977 | 1.05259 | 2.36960 |
| -1.36638 | -0.88637 | -0.56704 | -0.39017 | -0.12149 | 0.11000 | 0.42112 | 0.64504 | 1.08837 | 2.77179 |

Границы равновероятных интервалов для случайной величины с нулевым математическим ожиданием в условиях гипотез *N* и *L*:

*N* : *−*1*.*28155 *−* 0*.*84162 *−* 0*.*52440 *−* 0*.*25335 0*.*00000 0*.*25335 0*.*52440 0*.*84162 1*.*28155

*L* : *−*1*.*60944 *−* 0*.*91629 *−* 0*.*51083 *−* 0*.*22314 0*.*00000 0*.*22314 0*.*51083 0*.*91629 1*.*60944

ТР 4.1 Вариант 26

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| -7.50432 | -1.42138 | -0.74143 | -0.28369 | -0.11023 | 0.03583 | 0.29516 | 0.56894 | 0.98500 | 1.48368 |
| -5.76123 | -1.29467 | -0.65732 | -0.28254 | -0.10821 | 0.06107 | 0.30908 | 0.57185 | 0.99837 | 1.60214 |
| -3.10280 | -1.28942 | -0.59831 | -0.27854 | -0.10735 | 0.08905 | 0.33434 | 0.58804 | 1.06669 | 1.74873 |
| -2.95650 | -1.28734 | -0.58334 | -0.25641 | -0.08669 | 0.12857 | 0.33498 | 0.65366 | 1.10485 | 1.97547 |
| -2.77243 | -0.95375 | -0.51346 | -0.22529 | -0.06783 | 0.16738 | 0.34077 | 0.84431 | 1.13816 | 2.01000 |
| -2.75393 | -0.94864 | -0.49780 | -0.21926 | -0.06569 | 0.18826 | 0.36780 | 0.88611 | 1.14991 | 2.82342 |
| -2.23070 | -0.87828 | -0.45083 | -0.20181 | -0.05793 | 0.19774 | 0.37166 | 0.90571 | 1.18049 | 2.97464 |
| -1.81284 | -0.80950 | -0.41006 | -0.20021 | -0.03335 | 0.22113 | 0.41879 | 0.90929 | 1.25825 | 3.56471 |
| -1.60138 | -0.78633 | -0.36692 | -0.19902 | -0.01571 | 0.24710 | 0.47525 | 0.97979 | 1.26948 | 3.60186 |
| -1.53203 | -0.78631 | -0.32133 | -0.18976 | 0.02737 | 0.28503 | 0.49078 | 0.98451 | 1.32516 | 3.65286 |

ТР 4.1 Вариант 27

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| -1.37793 | -0.35282 | 0.23439 | 0.56334 | 0.94159 | 1.20959 | 1.49325 | 1.72603 | 2.03346 | 2.69687 |
| -1.01223 | -0.12941 | 0.24073 | 0.62489 | 0.98317 | 1.21713 | 1.52128 | 1.74134 | 2.17484 | 2.76050 |
| -0.95137 | -0.11561 | 0.32453 | 0.67429 | 1.01786 | 1.22963 | 1.58833 | 1.75480 | 2.23757 | 2.82736 |
| -0.92229 | -0.10867 | 0.35663 | 0.67668 | 1.04497 | 1.23334 | 1.60202 | 1.79253 | 2.23875 | 2.93627 |
| -0.83369 | -0.09232 | 0.38403 | 0.68258 | 1.06954 | 1.27165 | 1.60336 | 1.81198 | 2.29595 | 3.04940 |
| -0.67485 | -0.03057 | 0.40483 | 0.69011 | 1.08876 | 1.33877 | 1.61316 | 1.81240 | 2.34484 | 3.07301 |
| -0.61043 | 0.05181 | 0.45145 | 0.72180 | 1.17079 | 1.35531 | 1.63073 | 1.82900 | 2.34580 | 3.14423 |
| -0.59232 | 0.08590 | 0.47430 | 0.85719 | 1.18758 | 1.39117 | 1.64642 | 1.94770 | 2.46813 | 3.41661 |
| -0.54477 | 0.19987 | 0.49760 | 0.89364 | 1.19704 | 1.45702 | 1.65408 | 1.97492 | 2.56766 | 3.59557 |
| -0.40482 | 0.21928 | 0.54577 | 0.90014 | 1.20769 | 1.48514 | 1.68359 | 2.00877 | 2.64548 | 3.78680 |

Границы равновероятных интервалов для случайной величины с нулевым математическим ожиданием в условиях гипотез *N* и *L*:

*N* : *−*1*.*28155 *−* 0*.*84162 *−* 0*.*52440 *−* 0*.*25335 0*.*00000 0*.*25335 0*.*52440 0*.*84162 1*.*28155

*L* : *−*1*.*60944 *−* 0*.*91629 *−* 0*.*51083 *−* 0*.*22314 0*.*00000 0*.*22314 0*.*51083 0*.*91629 1*.*60944

ТР 4.1 Вариант 28

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| -2.02963 | -0.50682 | 0.09176 | 0.62455 | 0.90981 | 1.08954 | 1.18640 | 1.39853 | 1.90857 | 3.29054 |
| -1.53418 | -0.39204 | 0.29194 | 0.64270 | 0.91142 | 1.10381 | 1.21805 | 1.44226 | 2.16887 | 3.57494 |
| -1.18685 | -0.36856 | 0.31360 | 0.68705 | 0.91716 | 1.10428 | 1.22498 | 1.46256 | 2.17977 | 3.91742 |
| -1.13121 | -0.27880 | 0.33207 | 0.70958 | 0.93101 | 1.11603 | 1.24340 | 1.50652 | 2.21880 | 3.92595 |
| -1.11625 | -0.23512 | 0.42812 | 0.71572 | 0.94867 | 1.11755 | 1.25032 | 1.61757 | 2.26239 | 3.97742 |
| -1.07328 | -0.22641 | 0.43201 | 0.78379 | 0.94943 | 1.13693 | 1.25858 | 1.66016 | 2.36157 | 4.87619 |
| -0.97520 | -0.14353 | 0.46384 | 0.82127 | 0.98816 | 1.14720 | 1.26007 | 1.66972 | 2.39644 | 5.15777 |
| -0.75324 | -0.07065 | 0.57002 | 0.83476 | 1.02790 | 1.15461 | 1.27632 | 1.68399 | 2.80761 | 6.17671 |
| -0.54168 | 0.03377 | 0.59075 | 0.87105 | 1.04874 | 1.16399 | 1.37476 | 1.75729 | 2.89485 | 7.31127 |
| -0.51293 | 0.07870 | 0.59763 | 0.88371 | 1.06584 | 1.18180 | 1.39124 | 1.89936 | 2.90546 | 17.04083 |

Границы равновероятных интервалов для случайной величины с нулевым математическим ожиданием в условиях гипотез *N* и *L*:

*N* : *−*1*.*28155 *−* 0*.*84162 *−* 0*.*52440 *−* 0*.*25335 0*.*00000 0*.*25335 0*.*52440 0*.*84162 1*.*28155

*L* : *−*1*.*60944 *−* 0*.*91629 *−* 0*.*51083 *−* 0*.*22314 0*.*00000 0*.*22314 0*.*51083 0*.*91629 1*.*60944

ТР 4.1 Вариант 29

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| -3.07880 | -2.08649 | -1.58666 | -1.40458 | -1.01234 | -0.85086 | -0.64595 | -0.37243 | -0.03043 | 0.41957 |
| -2.55859 | -2.02745 | -1.57831 | -1.40333 | -1.00833 | -0.84562 | -0.64564 | -0.37085 | -0.02172 | 0.55028 |
| -2.55831 | -1.91185 | -1.56464 | -1.25836 | -0.98507 | -0.78129 | -0.61531 | -0.36259 | 0.02353 | 0.59370 |
| -2.53423 | -1.84324 | -1.56262 | -1.16665 | -0.94042 | -0.77986 | -0.60125 | -0.26696 | 0.05500 | 0.59586 |
| -2.43792 | -1.83388 | -1.55634 | -1.07699 | -0.93434 | -0.76830 | -0.53069 | -0.26015 | 0.28798 | 0.63480 |
| -2.40052 | -1.81465 | -1.50677 | -1.07471 | -0.91854 | -0.75456 | -0.52435 | -0.24440 | 0.29450 | 0.70261 |
| -2.33334 | -1.80269 | -1.46898 | -1.07277 | -0.91592 | -0.75442 | -0.50670 | -0.22220 | 0.29969 | 0.71319 |
| -2.30625 | -1.77725 | -1.44700 | -1.07015 | -0.90538 | -0.71293 | -0.48986 | -0.19275 | 0.31281 | 0.72211 |
| -2.24370 | -1.72599 | -1.43535 | -1.02821 | -0.88708 | -0.68552 | -0.46902 | -0.12194 | 0.31478 | 1.13450 |
| -2.10799 | -1.70281 | -1.41230 | -1.01349 | -0.88116 | -0.67265 | -0.43487 | -0.08065 | 0.37168 | 1.58073 |

ТР 4.1 Вариант 30

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| -5.87477 | -2.21892 | -2.06377 | -1.63568 | -1.34439 | -1.09527 | -0.90040 | -0.57615 | -0.16929 | 0.48150 |
| -5.65062 | -2.17615 | -2.04239 | -1.50620 | -1.32520 | -1.09387 | -0.89707 | -0.57090 | -0.00993 | 0.51825 |
| -4.43737 | -2.12437 | -2.03197 | -1.48497 | -1.27332 | -1.06835 | -0.86959 | -0.54314 | -0.00888 | 0.75127 |
| -4.04237 | -2.12167 | -1.99774 | -1.48088 | -1.26197 | -1.05815 | -0.86060 | -0.52826 | 0.06807 | 0.84435 |
| -3.81207 | -2.10616 | -1.99443 | -1.46526 | -1.21397 | -1.02625 | -0.81833 | -0.46050 | 0.13667 | 0.90743 |
| -3.77459 | -2.10404 | -1.92608 | -1.44371 | -1.20857 | -0.97373 | -0.72379 | -0.41450 | 0.16176 | 1.06528 |
| -2.69790 | -2.09491 | -1.92316 | -1.43570 | -1.20075 | -0.96441 | -0.65654 | -0.36922 | 0.31781 | 1.15385 |
| -2.67511 | -2.08778 | -1.89691 | -1.42369 | -1.16733 | -0.94753 | -0.63746 | -0.29342 | 0.35045 | 1.62663 |
| -2.52250 | -2.07677 | -1.71133 | -1.40853 | -1.14891 | -0.94597 | -0.61161 | -0.27999 | 0.44690 | 1.71925 |
| -2.27112 | -2.06445 | -1.69172 | -1.40476 | -1.11626 | -0.93133 | -0.58970 | -0.26937 | 0.47992 | 2.53572 |

Границы равновероятных интервалов для случайной величины с нулевым математическим ожиданием в условиях гипотез *N* и *L*:

*N* : *−*1*.*28155 *−* 0*.*84162 *−* 0*.*52440 *−* 0*.*25335 0*.*00000 0*.*25335 0*.*52440 0*.*84162 1*.*28155

*L* : *−*1*.*60944 *−* 0*.*91629 *−* 0*.*51083 *−* 0*.*22314 0*.*00000 0*.*22314 0*.*51083 0*.*91629 1*.*60944

Ответы

Значения симметричного нормального квантиля при *β* = 0*.*7 и *β* = 0*.*95 :

*t*0*.*7 = 1*.*0364; *t*0*.*95 = 1*.*960*.*

Значения хи-квадрат квантиля :

2

*χ*

0*.*2*,*9

0*.*05*,*9

0*.*025*,*9

0*.*5*,*9

= 8*.*34; *χ*2

= 12*.*24; *χ*2

= 16*.*92; *χ*2

= 19*.*02*.*

ТР 4.1 Вариант 1

*x*100 = 0*.*04793*, S*2

100

= 0*.*74675*, S*100 = 0*.*86415*, mp* = 0*.*11619*, Sp* = 0*.*87077*.*

Гипотеза *N* : *m* = 0*, σ*2 = 1*, σ* = 1*.*

Групп. *N* : 8 9 9 8 11 11 10 18 10 6 *KN* = 9*.*20*.*

Групп. *L* : 3 14 9 9 10 10 11 20 11 3 *KL* = 21*.*80*.*

*m*

*J*

0*.*7

*Jm*

= (*−*0*.*04163*,* 0*.*13749)*, JD*

= (*−*0*.*12144*,* 0*.*21730)*, JD*

0*.*7

= (0*.*63730*,* 0*.*85621)*, Jσ*

= (0*.*53976*,* 0*.*95374)*, Jσ*

0*.*7

= (0*.*79831*,* 0*.*92531)*.*

= (0*.*73469*,* 0*.*97660)*.*

0*.*95

ТР 4.1 Вариант 2

0*.*95

0*.*95

*x*100 = 0*.*09550*, S*2 = 2*.*28853*, S*100 = 1*.*51279*, mp* = 0*.*03002*, Sp* = 2*.*20010*.*

100 *√*

Гипотеза *L* : *m* = 0*, σ*2 = 2*, σ* = 2*.*

Групп. *N* : 14 3 11 9 10 11 11 10 5 16 *KN* = 13*.*00*.*

Групп. *L* : 13 4 11 9 10 11 10 11 9 12 *KL* = 5*.*40*.*

*m*

*J*

0*.*7

*Jm*

= (*−*0*.*06129*,* 0*.*25228)*, JD*

= (*−*0*.*20101*,* 0*.*39200)*, JD*

0*.*7

= (1*.*95310*,* 2*.*62395)*, Jσ*

= (1*.*65418*,* 2*.*92287)*, Jσ*

0*.*7

= (1*.*39753*,* 1*.*61986)*.*

= (1*.*28615*,* 1*.*70964)*.*

0*.*95

ТР 4.1 Вариант 3

0*.*95

0*.*95

*x*100 = 0*.*87299*, S*2 = 0*.*88352*, S*100 = 0*.*93996*, mp* = 0*.*79259*, Sp* = 0*.*86290*.*

100

Гипотеза *N* : *m* = 1*, σ*2 = 1*, σ* = 1*.*

Групп. *N* : 9 20 7 12 10 9 9 7 7 10 *KN* = 13*.*40*.*

Групп. *L* : 2 23 12 12 9 7 11 7 14 3 *KL* = 32*.*60*.*

*m*

*J*

0*.*7

*Jm*

= (0*.*77558*,* 0*.*97041)*, JD*

= (0*.*68876*,* 1*.*05722)*, JD*

0*.*7

= (0*.*75402*,* 1*.*01301)*, Jσ*

= (0*.*63862*,* 1*.*12842)*, Jσ*

0*.*7

= (0*.*86834*,* 1*.*00649)*.*

= (0*.*79914*,* 1*.*06227)*.*

0*.*95

ТР 4.1 Вариант 4

0*.*95

0*.*95

*x*100 = 1*.*05272*, S*2 = 1*.*81495*, S*100 = 1*.*34720*, mp* = 0*.*99822*, Sp* = 1*.*75541*.*

100 *√*

Гипотеза *L* : *m* = 1*, σ*2 = 2*, σ* = 2*.*

Групп. *N* : 12 12 6 6 15 9 11 5 9 15 *KN* = 11*.*80*.*

Групп. *L* : 7 14 9 7 14 8 11 6 12 12 *KL* = 8*.*00*.*

*m*

*J*

0*.*7

*Jm*

= (0*.*91309*,* 1*.*19234)*, JD*

= (0*.*78866*,* 1*.*31677)*, JD*

0*.*7

= (1*.*54893*,* 2*.*08097)*, Jσ*

= (1*.*31187*,* 2*.*31803)*, Jσ*

0*.*7

= (1*.*24456*,* 1*.*44256)*.*

= (1*.*14537*,* 1*.*52251)*.*

0*.*95

ТР 4.1 Вариант 5

0*.*95

0*.*95

*x*100 = *−*1*.*07816*, S*2 = 0*.*90651*, S*100 = 0*.*95211*, mp* = *−*1*.*02581*, Sp* = 0*.*93478*.*

100

Гипотеза *N* : *m* = 1*, σ*2 = 1*, σ* = 1*.*

*−*

Групп. *N* : 9 11 12 9 14 9 11 7 13 5 *KN* = 6*.*80*.*

Групп. *L* : 6 14 13 11 11 8 12 9 12 4 *KL* = 9*.*20*.*

*m*

*J*

0*.*7

*Jm*

= (*−*1*.*17684*, −*0*.*97949)*, JD*

= (*−*1*.*26478*, −*0*.*89155)*, JD*

0*.*7

= (0*.*77364*,* 1*.*03937)*, Jσ*

= (0*.*65524*,* 1*.*15778)*, Jσ*

0*.*7

= (0*.*87957*,* 1*.*01950)*.*

= (0*.*80947*,* 1*.*07600)*.*

0*.*95

ТР 4.1 Вариант 6

0*.*95

0*.*95

*x*100 = *−*1*.*01259*, S*2 = 2*.*72761*, S*100 = 1*.*65155*, mp* = *−*0*.*95949*, Sp* = 2*.*61448*.*

100 *√*

Гипотеза *L* : *m* = *−*1*, σ*2 = 2*, σ* = 2*.*

Групп. *N* : 12 11 9 3 13 7 13 12 7 13 *KN* = 10*.*40*.*

Групп. *L* : 9 10 13 6 10 6 14 13 12 7 *KL* = 8*.*00*.*

*m*

*J*

0*.*7

*Jm*

= (*−*1*.*18376*, −*0*.*84143)*, JD*

= (*−*1*.*33629*, −*0*.*68889)*, JD*

0*.*7

= (2*.*32783*,* 3*.*12739)*, Jσ*

= (1*.*97155*,* 3*.*48366)*, Jσ*

0*.*7

= (1*.*52572*,* 1*.*76844)*.*

= (1*.*40412*,* 1*.*86646)*.*

0*.*95

ТР 4.1 Вариант 7

0*.*95

0*.*95

*x*100 = *−*0*.*00987*, S*2 = 0*.*98553*, S*100 = 0*.*99274*, mp* = *−*0*.*11408*, Sp* = 0*.*96433*.*

100

Гипотеза *N* : *m* = 0*, σ*2 = 1*, σ* = 1*.*

Групп. *N* : 6 14 13 9 13 8 9 9 6 13 *KN* = 8*.*20*.*

Групп. *L* : 6 12 15 9 13 6 11 9 11 8 *KL* = 7*.*80*.*

*m*

*J*

0*.*7

*Jm*

= (*−*0*.*11276*,* 0*.*09301)*, JD*

= (*−*0*.*20445*,* 0*.*18470)*, JD*

0*.*7

= (0*.*84108*,* 1*.*12997)*, Jσ*

= (0*.*71235*,* 1*.*25870)*, Jσ*

0*.*7

= (0*.*91710*,* 1*.*06300)*.*

= (0*.*84401*,* 1*.*12192)*.*

0*.*95

ТР 4.1 Вариант 8

0*.*95

0*.*95

*x*100 = *−*0*.*04812*, S*2

100

= 1*.*58265*, S*100 = 1*.*25803*, mp* = 0*.*03725*, Sp* = 1*.*76904*.*

Гипотеза *L* : *m* = 0*, σ*2 = 2*, σ* = *√*2*.*

Групп. *N* : 9 6 9 10 13 19 11 11 5 7 *KN* = 14*.*40*.*

Групп. *L* : 7 8 9 12 11 18 11 12 5 7 *KL* = 12*.*20*.*

*m*

*J*

0*.*7

*Jm*

= (*−*0*.*17850*,* 0*.*08227)*, JD*

= (*−*0*.*29469*,* 0*.*19846)*, JD*

0*.*7

= (1*.*35068*,* 1*.*81461)*, Jσ*

= (1*.*14396*,* 2*.*02133)*, Jσ*

0*.*7

= (1*.*16219*,* 1*.*34708)*.*

= (1*.*06956*,* 1*.*42174)*.*

0*.*95

ТР 4.1 Вариант 9

0*.*95

0*.*95

*x*100 = 0*.*85241*, S*2 = 0*.*92356*, S*100 = 0*.*96102*, mp* = 0*.*85521*, Sp* = 0*.*87809*.*

100

Гипотеза *N* : *m* = 1*, σ*2 = 1*, σ* = 1*.*

Групп. *N* : 11 9 12 10 14 13 9 8 4 10 *KN* = 7*.*20*.*

Групп. *L* : 7 11 14 12 12 10 12 9 10 3 *KL* = 8*.*80*.*

*m*

*J*

0*.*7

*Jm*

= (0*.*75281*,* 0*.*95201)*, JD*

= (0*.*66405*,* 1*.*04077)*, JD*

0*.*7

= (0*.*78820*,* 1*.*05893)*, Jσ*

= (0*.*66757*,* 1*.*17956)*, Jσ*

0*.*7

= (0*.*88781*,* 1*.*02904)*.*

= (0*.*81705*,* 1*.*08608)*.*

0*.*95

ТР 4.1 Вариант 10

0*.*95

0*.*95

*x*100 = 0*.*73557*, S*2 = 2*.*07111*, S*100 = 1*.*43913*, mp* = 0*.*90459*, Sp* = 1*.*87001*.*

100 *√*

Гипотеза *L* : *m* = 1*, σ*2 = 2*, σ* = 2*.*

Групп. *N* : 19 5 12 10 9 11 13 8 6 7 *KN* = 15*.*00*.*

Групп. *L* : 13 10 14 9 9 10 14 8 7 6 *KL* = 7*.*20*.*

*m*

*J*

0*.*7

*Jm*

= (0*.*58641*,* 0*.*88472)*, JD*

= (0*.*45350*,* 1*.*01764)*, JD*

0*.*7

= (1*.*76755*,* 2*.*37467)*, Jσ*

= (1*.*49702*,* 2*.*64519)*, Jσ*

0*.*7

= (1*.*32949*,* 1*.*54100)*.*

= (1*.*22353*,* 1*.*62640)*.*

0*.*95

ТР 4.1 Вариант 11

0*.*95

0*.*95

*x*100 = *−*1*.*06770*, S*2 = 0*.*94643*, S*100 = 0*.*97284*, mp* = *−*1*.*06098*, Sp* = 1*.*06505*.*

100

Гипотеза *N* : *m* = 1*, σ*2 = 1*, σ* = 1*.*

*−*

Групп. *N* : 14 8 9 12 9 12 5 15 9 7 *KN* = 9*.*00*.*

Групп. *L* : 3 17 12 12 8 8 9 18 8 5 *KL* = 20*.*80*.*

*m*

*J*

0*.*7

*Jm*

= (*−*1*.*16852*, −*0*.*96687)*, JD*

= (*−*1*.*25837*, −*0*.*87702)*, JD*

0*.*7

= (0*.*80771*,* 1*.*08514)*, Jσ*

= (0*.*68409*,* 1*.*20876)*, Jσ*

0*.*7

= (0*.*89873*,* 1*.*04170)*.*

= (0*.*82710*,* 1*.*09944)*.*

0*.*95

ТР 4.1 Вариант 12

0*.*95

0*.*95

*x*100 = *−*1*.*17119*, S*2 = 1*.*66556*, S*100 = 1*.*29057*, mp* = *−*1*.*10430*, Sp* = 1*.*62590*.*

100 *√*

Гипотеза *L* : *m* = *−*1*, σ*2 = 2*, σ* = 2*.*

Групп. *N* : 17 8 9 8 15 10 6 9 8 10 *KN* = 10*.*40*.*

Групп. *L* : 12 12 10 9 14 8 8 11 8 8 *KL* = 4*.*20*.*

*m*

*J*

0*.*7

*Jm*

= (*−*1*.*30494*, −*1*.*03743)*, JD*

= (*−*1*.*42414*, −*0*.*91824)*, JD*

0*.*7

= (1*.*42144*,* 1*.*90968)*, Jσ*

= (1*.*20389*,* 2*.*12724)*, Jσ*

0*.*7

= (1*.*19224*,* 1*.*38191)*.*

= (1*.*09722*,* 1*.*45850)*.*

0*.*95

ТР 4.1 Вариант 13

0*.*95

0*.*95

*x*100 = 0*.*05717*, S*2 = 0*.*74761*, S*100 = 0*.*86464*, mp* = 0*.*05749*, Sp* = 0*.*88480*.*

100

Гипотеза *N* : *m* = 0*, σ*2 = 1*, σ* = 1*.*

Групп. *N* : 5 10 12 8 12 15 7 14 9 8 *KN* = 9*.*20*.*

Групп. *L* : 3 11 13 10 10 12 10 16 12 3 *KL* = 15*.*20*.*

*m*

*J*

0*.*7

*Jm*

= (*−*0*.*03244*,* 0*.*14679)*, JD*

= (*−*0*.*11229*,* 0*.*22664)*, JD*

0*.*7

= (0*.*63803*,* 0*.*85718)*, Jσ*

= (0*.*54038*,* 0*.*95483)*, Jσ*

0*.*7

= (0*.*79877*,* 0*.*92584)*.*

= (0*.*73511*,* 0*.*97715)*.*

0*.*95

ТР 4.1 Вариант 14

0*.*95

0*.*95

*x*100 = 0*.*07175*, S*2 = 1*.*92581*, S*100 = 1*.*38774*, mp* = 0*.*07039*, Sp* = 1*.*68877*.*

100 *√*

Гипотеза *L* : *m* = 0*, σ*2 = 2*, σ* = 2*.*

Групп. *N* : 12 9 6 6 10 20 10 7 7 13 *KN* = 16*.*40*.*

Групп. *L* : 11 8 8 6 10 18 12 7 8 12 *KL* = 11*.*00*.*

*m*

*J*

0*.*7

*Jm*

= (*−*0*.*07207*,* 0*.*21558)*, JD*

= (*−*0*.*20024*,* 0*.*34375)*, JD*

0*.*7

= (1*.*64355*,* 2*.*20808)*, Jσ*

= (1*.*39201*,* 2*.*45962)*, Jσ*

0*.*7

= (1*.*28201*,* 1*.*48596)*.*

= (1*.*17983*,* 1*.*56832)*.*

0*.*95

ТР 4.1 Вариант 15

0*.*95

0*.*95

*x*100 = 0*.*94574*, S*2 = 1*.*00202*, S*100 = 1*.*00101*, mp* = 1*.*08127*, Sp* = 1*.*07517*.*

100

Гипотеза *N* : *m* = 1*, σ*2 = 1*, σ* = 1*.*

Групп. *N* : 13 12 6 6 10 12 14 11 10 6 *KN* = 8*.*20*.*

Групп. *L* : 8 13 11 6 9 10 16 14 10 3 *KL* = 13*.*20*.*

*m*

*J*

0*.*7

*Jm*

= (0*.*84199*,* 1*.*04948)*, JD*

= (0*.*74954*,* 1*.*14194)*, JD*

0*.*7

= (0*.*85516*,* 1*.*14889)*, Jσ*

= (0*.*72427*,* 1*.*27977)*, Jσ*

0*.*7

= (0*.*92475*,* 1*.*07186)*.*

= (0*.*85104*,* 1*.*13127)*.*

0*.*95

ТР 4.1 Вариант 16

0*.*95

0*.*95

*x*100 = 0*.*92427*, S*2 = 1*.*48035*, S*100 = 1*.*21669*, mp* = 0*.*97317*, Sp* = 1*.*52255*.*

100 *√*

Гипотеза *L* : *m* = 1*, σ*2 = 2*, σ* = 2*.*

Групп. *N* : 13 7 9 9 14 15 7 7 5 14 *KN* = 12*.*00*.*

Групп. *L* : 9 10 11 8 14 13 7 9 11 8 *KL* = 4*.*60*.*

*m*

*J*

0*.*7

*Jm*

= (0*.*79817*,* 1*.*05037)*, JD*

= (0*.*68580*,* 1*.*16274)*, JD*

0*.*7

= (1*.*26337*,* 1*.*69732)*, Jσ*

= (1*.*07001*,* 1*.*89068)*, Jσ*

0*.*7

= (1*.*12400*,* 1*.*30281)*.*

= (1*.*03442*,* 1*.*37502)*.*

0*.*95

ТР 4.1 Вариант 17

0*.*95

0*.*95

*x*100 = *−*0*.*90197*, S*2 = 0*.*84033*, S*100 = 0*.*91670*, mp* = *−*0*.*76351*, Sp* = 0*.*95451*.*

100

Гипотеза *N* : *m* = 1*, σ*2 = 1*, σ* = 1*.*

*−*

Групп. *N* : 10 7 7 8 8 11 13 14 15 7 *KN* = 8*.*60*.*

Групп. *L* : 6 9 9 8 8 9 15 19 15 2 *KL* = 22*.*20*.*

*m*

*J*

0*.*7

*Jm*

= (*−*0*.*99698*, −*0*.*80696)*, JD*

= (*−*1*.*08164*, −*0*.*72230)*, JD*

0*.*7

= (0*.*71717*,* 0*.*96350)*, Jσ*

= (0*.*60740*,* 1*.*07326)*, Jσ*

0*.*7

= (0*.*84686*,* 0*.*98158)*.*

= (0*.*77936*,* 1*.*03598)*.*

0*.*95

ТР 4.1 Вариант 18

0*.*95

0*.*95

*x*100 = *−*0*.*91346*, S*2 = 1*.*41321*, S*100 = 1*.*18879*, mp* = *−*1*.*03011*, Sp* = 1*.*72814*.*

100 *√*

Гипотеза *L* : *m* = *−*1*, σ*2 = 2*, σ* = 2*.*

Групп. *N* : 11 8 3 13 18 7 11 7 9 13 *KN* = 15*.*60*.*

Групп. *L* : 7 12 3 16 15 6 12 10 12 7 *KL* = 15*.*60*.*

*m*

*J*

0*.*7

*Jm*

= (*−*1*.*03666*, −*0*.*79025)*, JD*

= (*−*1*.*14646*, −*0*.*68046)*, JD*

0*.*7

= (1*.*20608*,* 1*.*62035)*, Jσ*

= (1*.*02149*,* 1*.*80494)*, Jσ*

0*.*7

= (1*.*09822*,* 1*.*27293)*.*

= (1*.*01069*,* 1*.*34348)*.*

0*.*95

ТР 4.1 Вариант 19

0*.*95

0*.*95

*x*100 = *−*0*.*14937*, S*2 = 0*.*84002*, S*100 = 0*.*91653*, mp* = *−*0*.*21508*, Sp* = 0*.*79990*.*

100

Гипотеза *N* : *m* = 0*, σ*2 = 1*, σ* = 1*.*

Групп. *N* : 12 11 11 15 5 11 10 10 8 7 *KN* = 7*.*00*.*

Групп. *L* : 6 15 14 15 4 9 12 13 9 3 *KL* = 18*.*20*.*

*m*

*J*

0*.*7

*Jm*

= (*−*0*.*24436*, −*0*.*05438)*, JD*

= (*−*0*.*32901*,* 0*.*03027)*, JD*

0*.*7

= (0*.*71690*,* 0*.*96314)*, Jσ*

= (0*.*60718*,* 1*.*07286)*, Jσ*

0*.*7

= (0*.*84670*,* 0*.*98140)*.*

= (0*.*77922*,* 1*.*03579)*.*

0*.*95

ТР 4.1 Вариант 20

0*.*95

0*.*95

*x*100 = 0*.*06134*, S*2 = 1*.*66430*, S*100 = 1*.*29008*, mp* = 0*.*06304*, Sp* = 1*.*56400*.*

100 *√*

Гипотеза *L* : *m* = 0*, σ*2 = 2*, σ* = 2*.*

Групп. *N* : 12 5 9 11 9 14 10 5 11 14 *KN* = 9*.*00*.*

Групп. *L* : 7 9 10 11 9 13 11 6 13 11 *KL* = 4*.*80*.*

*m*

*J*

0*.*7

*Jm*

= (*−*0*.*07237*,* 0*.*19504)*, JD*

= (*−*0*.*19152*,* 0*.*31419)*, JD*

0*.*7

= (1*.*42037*,* 1*.*90824)*, Jσ*

= (1*.*20298*,* 2*.*12563)*, Jσ*

0*.*7

= (1*.*19179*,* 1*.*38139)*.*

= (1*.*09681*,* 1*.*45795)*.*

0*.*95

ТР 4.1 Вариант 21

0*.*95

0*.*95

*x*100 = 1*.*00640*, S*2 = 1*.*27919*, S*100 = 1*.*13101*, mp* = 0*.*96334*, Sp* = 1*.*19573*.*

100

Гипотеза *N* : *m* = 1*, σ*2 = 1*, σ* = 1*.*

Групп. *N* : 12 12 8 11 8 5 7 12 10 15 *KN* = 8*.*00*.*

Групп. *L* : 9 10 14 10 8 4 8 16 16 5 *KL* = 15*.*80*.*

*m*

*J*

0*.*7

*Jm*

= (0*.*88918*,* 1*.*12361)*, JD*

= (0*.*78472*,* 1*.*22807)*, JD*

0*.*7

= (1*.*09170*,* 1*.*46668)*, Jσ*

= (0*.*92462*,* 1*.*63376)*, Jσ*

0*.*7

= (1*.*04484*,* 1*.*21106)*.*

= (0*.*96157*,* 1*.*27819)*.*

0*.*95

ТР 4.1 Вариант 22

0*.*95

0*.*95

*x*100 = 0*.*87523*, S*2 = 2*.*41160*, S*100 = 1*.*55293*, mp* = 1*.*00694*, Sp* = 2*.*72338*.*

100 *√*

Гипотеза *L* : *m* = 1*, σ*2 = 2*, σ* = 2*.*

Групп. *N* : 15 8 10 6 10 11 15 5 10 10 *KN* = 9*.*60*.*

Групп. *L* : 8 13 12 8 8 10 16 6 13 6 *KL* = 10*.*20*.*

*m*

*J*

0*.*7

*Jm*

= (0*.*71428*,* 1*.*03618)*, JD*

= (0*.*57086*,* 1*.*17961)*, JD*

0*.*7

= (2*.*05813*,* 2*.*76506)*, Jσ*

= (1*.*74314*,* 3*.*08006)*, Jσ*

0*.*7

= (1*.*43462*,* 1*.*66285)*.*

= (1*.*32028*,* 1*.*75501)*.*

0*.*95

ТР 4.1 Вариант 23

0*.*95

0*.*95

*x*100 = *−*1*.*10373*, S*2 = 1*.*11471*, S*100 = 1*.*05580*, mp* = *−*1*.*07595*, Sp* = 1*.*15183*.*

100

Гипотеза *N* : *m* = 1*, σ*2 = 1*, σ* = 1*.*

*−*

Групп. *N* : 17 5 12 9 10 10 9 8 12 8 *KN* = 9*.*20*.*

Групп. *L* : 8 13 13 10 9 8 11 12 12 4 *KL* = 7*.*20*.*

*m*

*J*

0*.*7

*Jm*

0*.*95

= (*−*1*.*21315*, −*0*.*99431)*, JD*

= (*−*1*.*31067*, −*0*.*89679)*, JD*

0*.*7

0*.*95

= (0*.*95133*,* 1*.*27809)*, Jσ*

= (0*.*80573*,* 1*.*42369)*, Jσ*

0*.*7

0*.*95

= (0*.*97536*,* 1*.*13053)*.*

= (0*.*89762*,* 1*.*19318)*.*

ТР 4.1 Вариант 24

*x*100 = *−*1*.*10656*, S*2

= 1*.*79217*, S*100 = 1*.*33872*, mp* = *−*1*.*25388*, Sp* = 1*.*86326*.*

100 *√*

Гипотеза *L* : *m* = *−*1*, σ*2 = 2*, σ* = 2*.*

Групп. *N* : 18 12 8 12 8 4 7 9 11 11 *KN* = 12*.*80*.*

Групп. *L* : 9 16 13 14 6 3 8 12 10 9 *KL* = 13*.*60*.*

*m*

*J*

0*.*7

*Jm*

= (*−*1*.*24531*, −*0*.*96782)*, JD*

= (*−*1*.*36895*, −*0*.*84417)*, JD*

0*.*7

= (1*.*52949*,* 2*.*05485)*, Jσ*

= (1*.*29541*,* 2*.*28894)*, Jσ*

0*.*7

= (1*.*23673*,* 1*.*43347)*.*

= (1*.*13816*,* 1*.*51292)*.*

0*.*95

ТР 4.1 Вариант 25

0*.*95

0*.*95

*x*100 = *−*0*.*08044*, S*2 = 0*.*94293*, S*100 = 0*.*97105*, mp* = *−*0*.*11472*, Sp* = 0*.*94772*.*

100

Гипотеза *N* : *m* = 0*, σ*2 = 1*, σ* = 1*.*

Групп. *N* : 12 10 12 9 15 9 12 6 5 10 *KN* = 8*.*00*.*

Групп. *L* : 6 12 16 9 15 8 11 9 8 6 *KL* = 10*.*80*.*

*m*

*J*

0*.*7

*Jm*

= (*−*0*.*18108*,* 0*.*02020)*, JD*

= (*−*0*.*27077*,* 0*.*10988)*, JD*

0*.*7

= (0*.*80473*,* 1*.*08114)*, Jσ*

= (0*.*68156*,* 1*.*20430)*, Jσ*

0*.*7

= (0*.*89707*,* 1*.*03978)*.*

= (0*.*82557*,* 1*.*09741)*.*

0*.*95

ТР 4.1 Вариант 26

0*.*95

0*.*95

*x*100 = *−*0*.*00421*, S*2

= 2*.*44384*, S*100 = 1*.*56328*, mp* = 0*.*03160*, Sp* = 2*.*23144*.*

Гипотеза :

*L*

*m*

*, σ*

100

= 0 2 = 2

= *√*2

Групп. *N* : 14 3 7 10 15 10 11 4 15 11 *KN* = 16*.*20*.*

*, σ*

*.*

Групп. *L* : 8 8 9 10 14 9 12 8 14 8 *KL* = 5*.*40*.*

*m*

*J*

0*.*7

*Jm*

= (*−*0*.*16623*,* 0*.*15781)*, JD*

= (*−*0*.*31061*,* 0*.*30219)*, JD*

0*.*7

= (2*.*08565*,* 2*.*80203)*, Jσ*

= (1*.*76644*,* 3*.*12124)*, Jσ*

0*.*7

= (1*.*44418*,* 1*.*67393)*.*

= (1*.*32908*,* 1*.*76670)*.*

0*.*95

ТР 4.1 Вариант 27

0*.*95

0*.*95

*x*100 = 1*.*16174*, S*2 = 1*.*22463*, S*100 = 1*.*10663*, mp* = 1*.*20864*, Sp* = 1*.*03295*.*

100

Гипотеза *N* : *m* = 1*, σ*2 = 1*, σ* = 1*.*

Групп. *N* : 11 7 10 9 5 12 8 15 7 16 *KN* = 11*.*40*.*

Групп. *L* : 7 10 11 9 5 10 9 16 12 11 *KL* = 7*.*80*.*

*m*

*J*

0*.*7

*Jm*

= (1*.*04705*,* 1*.*27643)*, JD*

= (0*.*94484*,* 1*.*37864)*, JD*

0*.*7

= (1*.*04514*,* 1*.*40412)*, Jσ*

= (0*.*88518*,* 1*.*56408)*, Jσ*

0*.*7

= (1*.*02232*,* 1*.*18496)*.*

= (0*.*94084*,* 1*.*25063)*.*

0*.*95

ТР 4.1 Вариант 28

0*.*95

0*.*95

*x*100 = 1*.*31871*, S*2 = 4*.*74473*, S*100 = 2*.*17824*, mp* = 1*.*07769*, Sp* = 3*.*81409*.*

100 *√*

Гипотеза *L* : *m* = 1*, σ*2 = 2*, σ* = 2*.*

Групп. *N* : 13 8 6 8 12 18 9 5 6 15 *KN* = 16*.*80*.*

Групп. *L* : 8 12 7 8 12 15 12 7 6 13 *KL* = 8*.*80*.*

*m*

*J*

0*.*7

*Jm*

= (1*.*09296*,* 1*.*54447)*, JD*

= (0*.*89178*,* 1*.*74565)*, JD*

0*.*7

= (4*.*04930*,* 5*.*44016)*, Jσ*

= (3*.*42955*,* 6*.*05990)*, Jσ*

0*.*7

= (2*.*01229*,* 2*.*33241)*.*

= (1*.*85191*,* 2*.*46169)*.*

0*.*95

ТР 4.1 Вариант 29

0*.*95

0*.*95

*x*100 = *−*0*.*85172*, S*2 = 0*.*85237*, S*100 = 0*.*92324*, mp* = *−*0*.*86601*, Sp* = 0*.*93191*.*

100

Гипотеза *N* : *m* = 1*, σ*2 = 1*, σ* = 1*.*

*−*

Групп. *N* : 8 6 11 8 9 15 11 10 6 16 *KN* = 10*.*40*.*

Групп. *L* : 1 11 13 8 9 12 14 11 15 6 *KL* = 15*.*80*.*

*m*

*J*

0*.*7

*Jm*

= (*−*0*.*94741*, −*0*.*75604)*, JD*

= (*−*1*.*03268*, −*0*.*67077)*, JD*

0*.*7

= (0*.*72744*,* 0*.*97731)*, Jσ*

= (0*.*61611*,* 1*.*08864)*, Jσ*

0*.*7

= (0*.*85290*,* 0*.*98859)*.*

= (0*.*78493*,* 1*.*04338)*.*

0*.*95

ТР 4.1 Вариант 30

0*.*95

0*.*95

*x*100 = *−*1*.*13762*, S*2 = 1*.*82611*, S*100 = 1*.*35134*, mp* = *−*1*.*10576*, Sp* = 1*.*68210*.*

100 *√*

Гипотеза *L* : *m* = *−*1*, σ*2 = 2*, σ* = 2*.*

Групп. *N* : 9 19 3 13 11 10 9 7 5 14 *KN* = 19*.*20*.*

Групп. *L* : 8 19 4 13 11 10 9 7 11 8 *KL* = 14*.*60*.*

*m*

*J*

0*.*7

*Jm*

0*.*95

= (*−*1*.*27767*, −*0*.*99756)*, JD*

= (*−*1*.*40248*, −*0*.*87275)*, JD*

0*.*7

0*.*95

= (1*.*55846*,* 2*.*09376)*, Jσ*

= (1*.*31994*,* 2*.*33228)*, Jσ*

0*.*7

0*.*95

= (1*.*24838*,* 1*.*44698)*.*

= (1*.*14889*,* 1*.*52718)*.*