

One-Sample Runs Test for Randomness

Test: One-Sample Runs Test for Randomness

Design: Randomness of the observed row-order sequence of final grades above and below the sample median.

Variables: ordered G3 sequence

Null hypothesis: Above-median and below-median observations occur in random order.

Formula: $E(R)=1+2n_{0n_1}/N$; $Var(R)=2n_{0n_1}(2n_{0n_1}-N)/[N^2(N-1)]$

Source rows: 649

Calculated metrics:

median: 12

below_count: 301

above_count: 276

ties_removed: 72

runs: 231

expected_runs: 288.958405545927

variance: 143.458480762164

z_statistic: -4.83897430192872

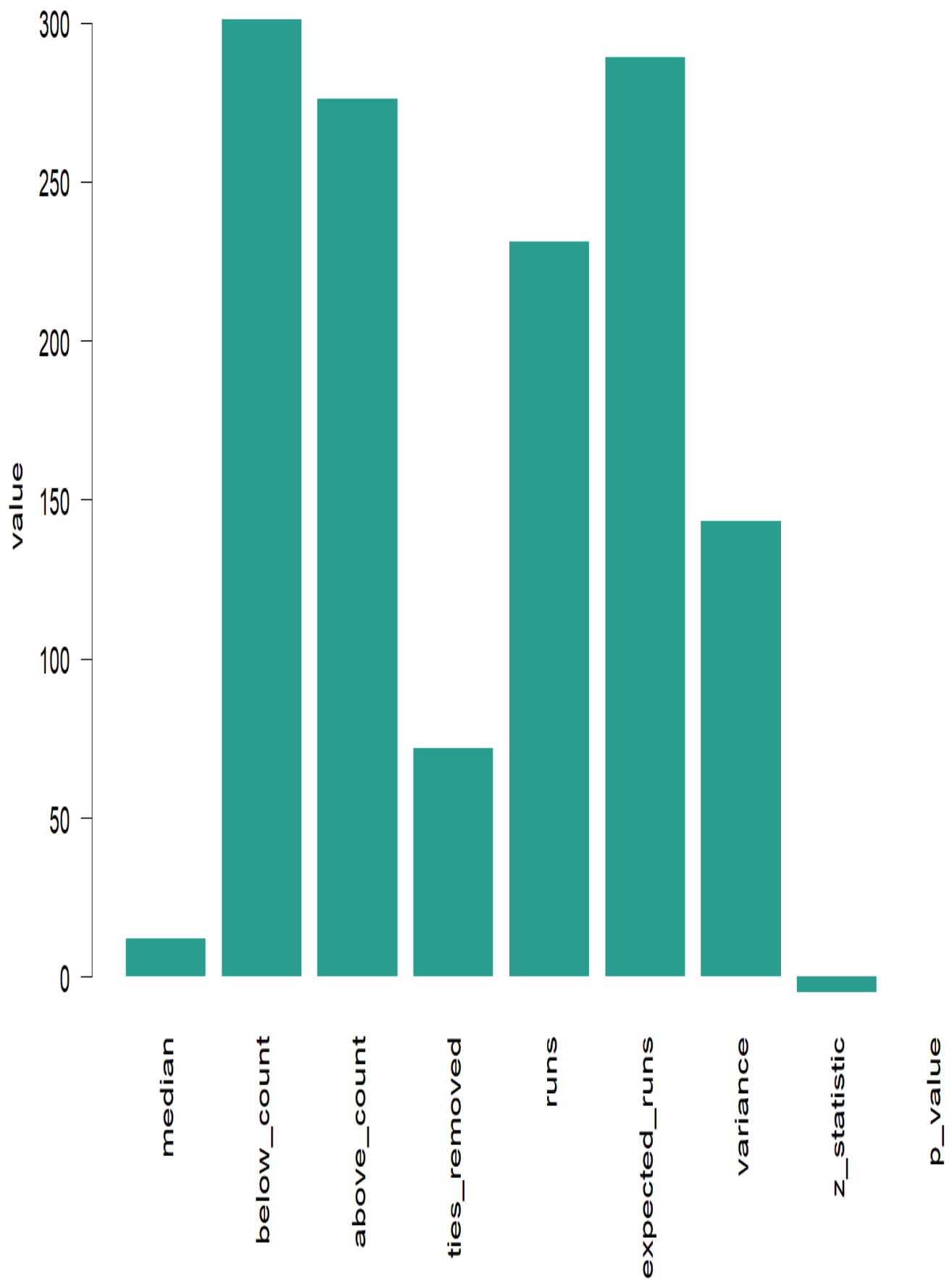
p_value: 1.30510918616748e-06

Interpretation:

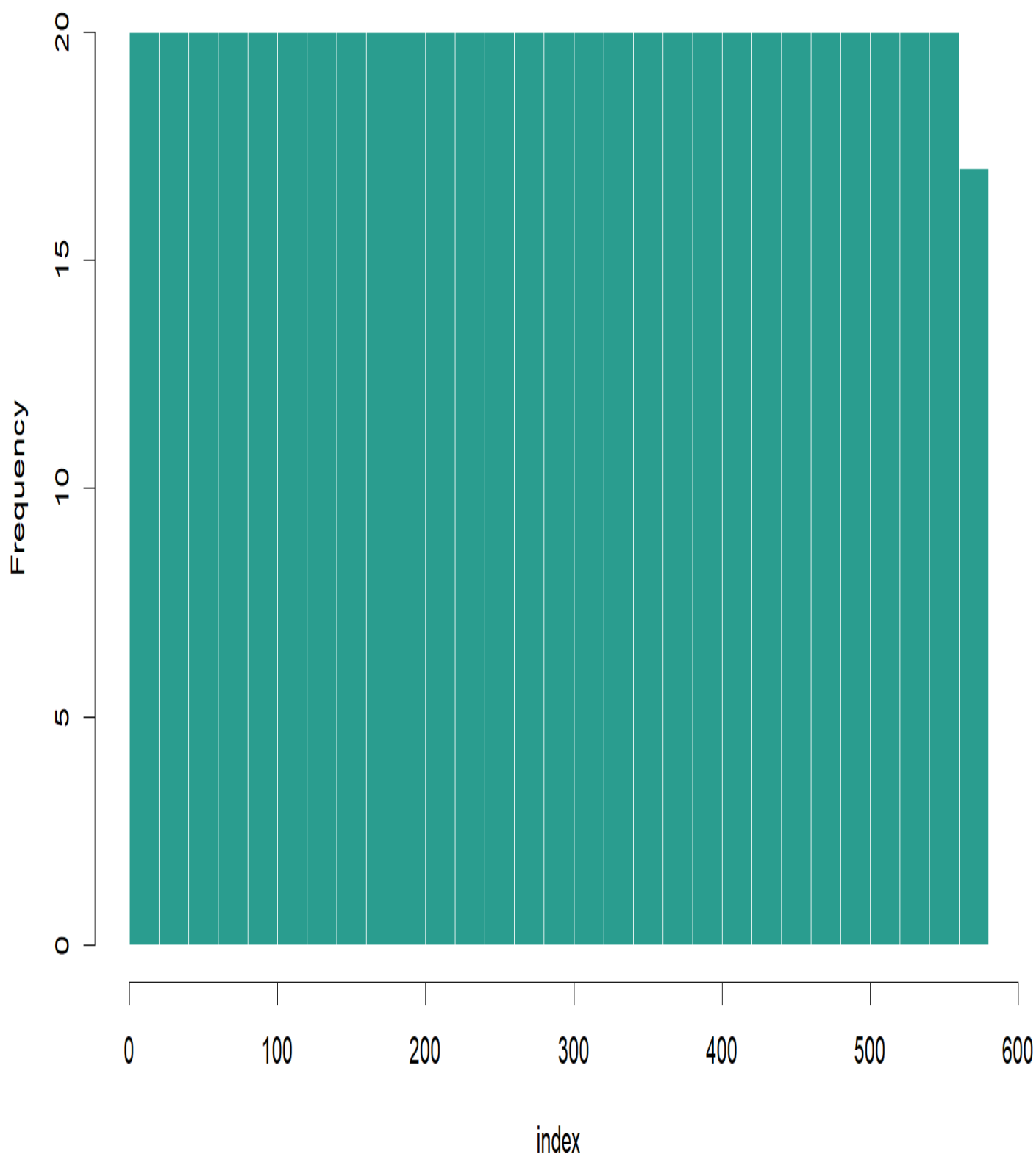
Median ties are removed before runs are counted.

Runs p = 1.30510918616748e-06

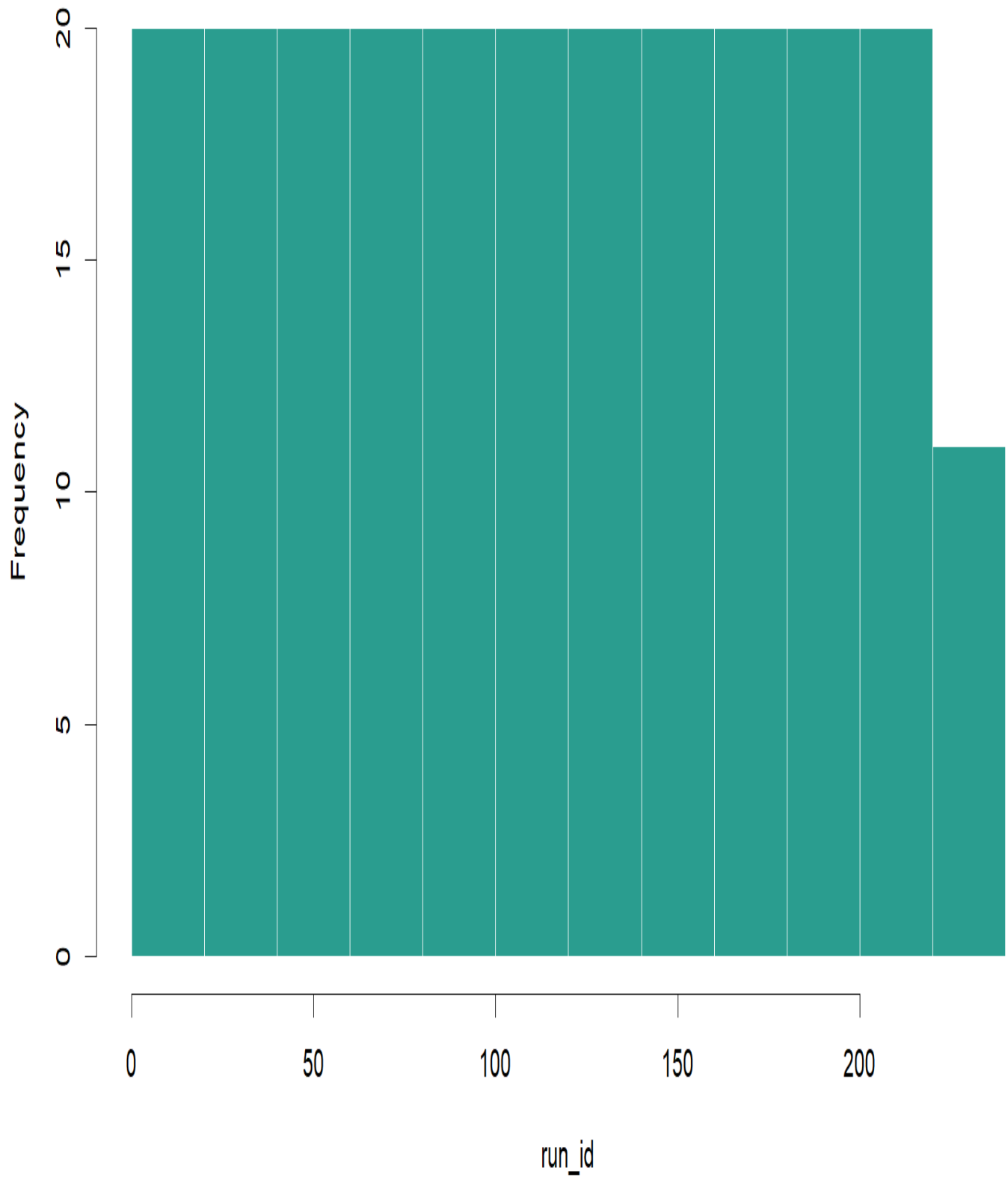
One-Sample Runs Test for Randomness - primary metrics



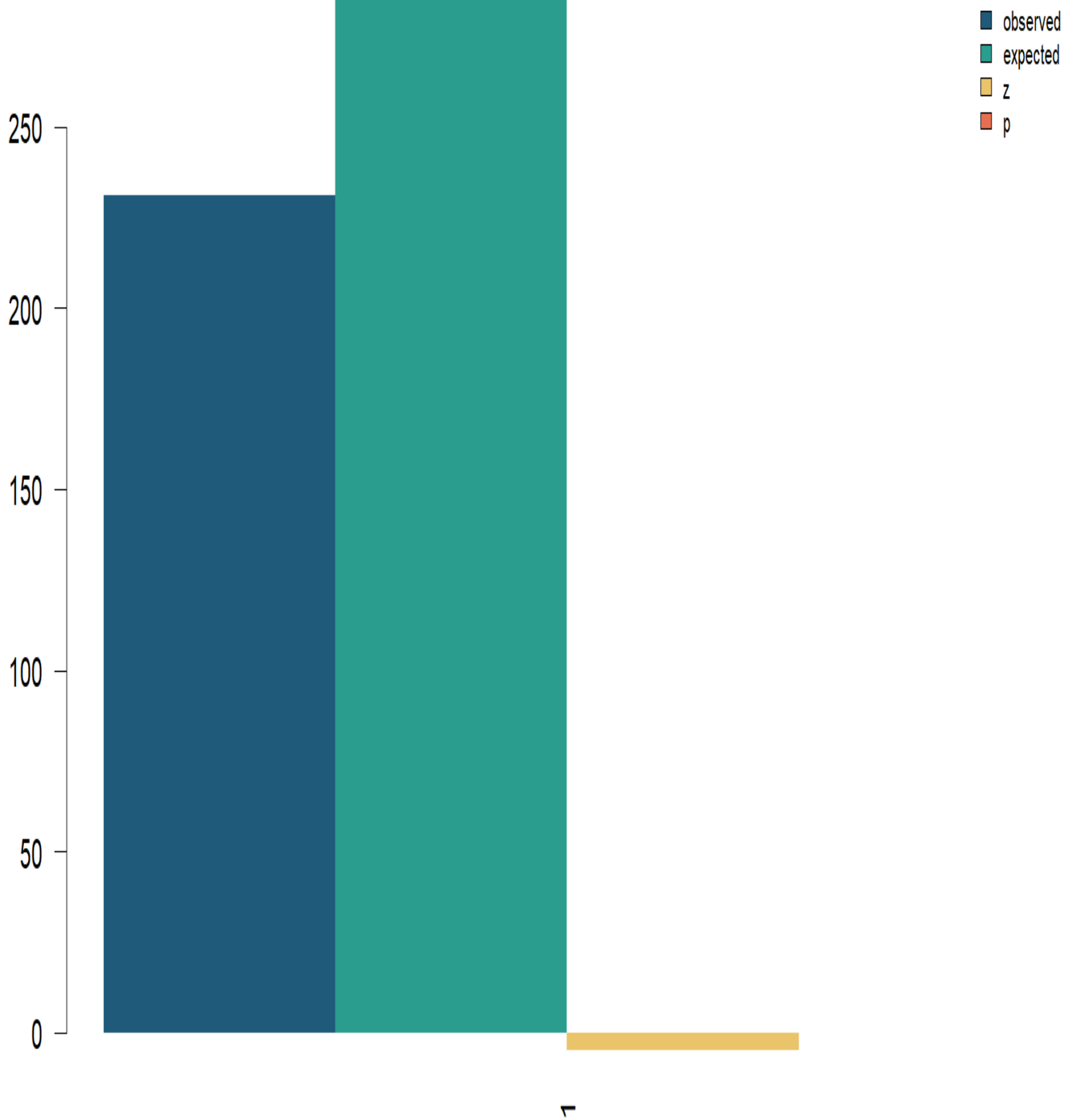
One-Sample Runs Test for Randomness - encoded sequence



One-Sample Runs Test for Randomness - run lengths



One-Sample Runs Test for Randomness - run summary



One-Sample Runs Test for Randomness verified results

