# **New Zealand Programming Contest 2025**

#### **EDITORIALS**

The statistics are given separately. Note there were 97 teams taking part in the contest who made at least 1 submission.

Editorials for 30 and 100 point problems are available separately.

#### **3 POINT PROBLEMS**

3 point problems are designed so that there are no difficult algorithms required, and the solution should be quite straightforward.

#### A Golf Tournament 64 solutions

Read name, handicap and score. Net score is score – handicap.

Output sorted by net score, lowest first.

Third most solutions for any problem.

# B What is my Change? 39 solutions

Read the bill items and add them up. Apply the algorithm to the total rounding down or up depending on the last digit. Subtract rounded total from money offered. Remember to output in the required format with 2 digits for cents.

#### C Panel Area 33 solutions

Work out the area of the wall, then work out and add the areas for up to 5 windows. Look for a possible error if windows are greater or equal in area to the wall. If not, subtract window area from wall area and round.

NOTE The explanation for the first sample was wrong as it rounded before subtraction and was 0.01 out. A clarification was issued – sorry if this confused you.

#### **D Jumbled Words** 67 solutions

The words are space separated. Process each word.

If the word has more than 3 letters, read each letter between first and last (exclusive) and output them in the reverse order.

Second most solutions for any problem.

## **10 POINT PROBLEMS**

10 point problems are designed so that there are no difficult algorithms required, and the solution should not be very complicated.

#### E Phone Ban 76 solutions

Read a name and a misdemeanour code, then calculate the demerit points. Add all demerit points for each pupil. Check the total points for each named person and see if over 50 or over 30. Output names of those in each category.

NOTE There was a small error in the printed sample, but the data used in testing was correct.

Most solutions for any problem.

# F Graph 51 solutions

Most solutions would use a 2D array and put the appropriate symbol in each cell. The array would then be displayed on screen, with each empty cell represented by a dot.

# G Seven Wonders 24 solutions

May look complicated, but the explanations for the samples show what to do:

- Add the number in line 3
- Work out and add the points for each of the 4 token types from line 4.
- Add the numbers in lines 5 and 6
- Work out and add the points for each of cards in line 7, and any bonus.
- Work out and add how many groups of 3 are shown on line 8.

Only 13% of solutions for this were correct.

### H Darts 17 solutions

A popular game in some parts of the world, especially in pubs.

Work out the points scored by each turn of 3 throws, remembering to triple and double where appropriate. Subtract from previous total.

Look out for a remaining score of 0 finishing with a Double – this is a win.

Otherwise, a score taking the total to 1 or less means that turn must be ignored.

Fewest solution of all the 10 point problems.