

The following problem had the highest number of correct responses (77 of the 80 students answered it correctly), and is therefore considered the easiest question on the written test.

Test Problem #5: Solve for  $x$ , given that  $8(1 + 2x) + 9(x - 3) = 6$ .

- a) 1    b) 3    c) 6    d) 12    e) 16

Since only 11 students answered the following problem correctly, the following problem is considered the most difficult problem on the written test.

Test Problem #30: How many ways can you arrange the letters in the word TOMATO if there are no double letters in the arrangement? (For example, ATMOOT is not allowed.)

- a) 24    b) 60    c) 84    d) 96    e) 180

As for the Individual Cipherring problems, the easiest problem was the second one. 76 out of 80 students answered this problem correctly.

Individual Cipherring #2: Evaluate  $3$  to the power  $2$  to the power  $2$ .

However, only 11 students answered the following problem correctly.

Individual Cipherring #9: How many factors of 700 are odd numbers?

For the Pair Cipherring questions, the students work with a partner. In each round, they receive four problems at once to work on together. The easiest and the hardest problems happened to be in the same round! Of the 40 pairs of students participating in the pair cipherring round, 33 pairs answered the following correctly:

Pair Cipherring #2-3: Five numbers have an average of 8. When a sixth number is added, the numbers have an average of 9. What is the added number?

Only three pairs answered this question correctly:

Pair Cipherring #2-4: Solve for  $x$ :  $16/x^3 = x$ .

Answers: A; C; 81; 6; 14; 2 and -2