ACSL

2012 - 2013 **American Computer Science League** **Contest #2**

Junior Division

Cells

PROBLEM: The ACSL cell always has 8-character bits. The bits are some combination of A, B, C, D, E, F, G, and H. The cell performs operations as listed below:

DIVIDE – The cell divides into two cells with one cell taking the first four bits and the second cell taking the last four bits. Then each partial cell replicates and concatenates to get back to 8 bits each.

e.g. DIVIDE ABCDEFGH becomes ABCDABCD and EFGHEFGH

ADDn - The first n ($0 \leq n \leq 4$) bits replicate and are concatenated to the first n bits. The last n bits are deleted.

e.g. ADD3 ABCDEFGH becomes ABCABCDE

SUBTRACTn - The first n ($0 \leq n \leq 4$) bits are deleted and the last n bits replicate and are concatenated on the right.

e.g. SUBTRACT3 ABCDEFGH becomes DEFGHFGH

INPUT: There will be 5 lines of input. Each line will contain an operation followed by a string representing the 8 bit cell.

OUTPUT: Print the outcome of the operation on the cell.

SAMPLE INPUT	SAMPLE OUTPUT
1. DIVIDE, ABBCDFGG	1. ABBCABBC and DFGGDFGG
2. ADD3, ABBCDFGG	2. ABBABBCD
3. SUBTRACT3, ABBCDFGG	3. CDFGGFGG
4. SUBTRACT3, GGABBCDF	4. BBCDFCDF
5. ADD3, GGABBCDF	5. GGAGGABB

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TEST DATA

TEST INPUT

1. DIVIDE, ABGHBEBC
2. ADD1, BCBCFDFD
3. SUBTRACT2, ABEECDAB
4. ADD4, ADDFHFBE
5. SUBTRACT0, ABCDEFGH

TEST OUTPUT

1. ABGHABGH and BEBCBEBC
2. BBCBCFDF
3. EECDABAB
4. ADDFADDF
5. ABCDEFGH