ACSL Scrabble
Senior Division

Problem: ACSL Scrabble is a lettered tile game played on a grid game board. The board for this program will be 4 x 10. The grid squares are numbered as below:

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40

The squares that are every other multiple of 3 (3, 9, 15...) are Double Letter score squares.

The squares that are multiples of 5 and not used above are Triple Letter score squares.

The squares that are multiples of 7 and not used above are Double Word score squares.

The squares that are multiples of 8 and not used above are Triple Word score squares.

Letter values will come from the following chart:

A, E - 1 point
D, R - 2 points
B, M - 3 points
V, Y - 4 points
J, X - 8 points

INPUT: There will be 6 lines of input. The first line will give the letters of the word. The word will always have 4 letters. The remaining 5 lines will contain 3 starting locations and directions for the word. The 1, H on Sample Input Line 2 indicates that the word starts at Location 1 and is placed horizontally across the board. Words can be placed horizontally (H) or vertically (V) on the board.

OUTPUT: For each set of starting locations, print the largest point total scored.

SAMPLE INPUT
1. J, A, V, A
2. 1, H, 11, H, 21, H
3. 1, V, 2, V, 3, V
4. 2, H, 12, H, 22, H
5. 3, V, 4, V, 5, V
6. 7, H, 6, V, 17, H

SAMPLE OUTUT
1. 66
2. 42
3. 48
4. 84
5. 120

ACSL Scrabble
Senior Division
TEST DATA

TEST INPUT	TEST OUTPUT
1. X, R, A, Y	1. 51
2. 1, H, 12, H, 23 H	2. 96
3. 2, V, 13, H, 8, V	3. 90
4. 7, V, 8, V, 9, V	4. 144
5. 7, H, 25, H, 13, H	5. 144
6. 7, V, 7, H, 4, V	