ACSL

American Computer Science League

2013 - 2014 **Contest #1**

ACSL Scrabble
Junior 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 be starting locations for the word. Words will only be placed horizontally across the grid.

OUTPUT: For each starting location, print the total points scored by the word. No word will have more than one word score multiplier.

SAMPLE INPUT
1. J, A, V, A
2. 1
3. 2
4. 4
5. 12
6. 21

SAMPLE OUTPUT
1. 18
2. 17
3. 32
4. 30
5. 66

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ACSL Scrabble
Junior Division

TEST DATA

TEST INPUT	TEST OUTPUT
1. X, R, A, Y	
2. 3	1. 25
3. 12	2. 38
4. 27	3. 62
5. 31	4. 48
6. 35	5. 31

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ACSL_Scrabble
Intermediate Division

Problem: The 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 be starting locations for the word and a direction. horizontal (H) or vertical (V).

OUTPUT: For each starting location, print the total points scored by the word. No word will have more than one word score multiplier

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

SAMPLE OUTPUT
1. 18
2. 17
3. 42
4. 30
5. 66

INTERMEDIATE

Test Input	Test Output
1. X, R, A, Y	
2. 3, V	1. 27
3. 7, V	2. 32
4. 10, V	3. 42
5. 31, H	4. 48
6. 35, H	5. 23

ACSL

American Computer Science League

2013 - 2014 **Contest #1**

ACSL_Scrabble
Senior Division

Problem: The 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 for the word. Words will only be placed horizontally across the grid.

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