Problem 2

Scrabble

Scrabble is a word board game in which players use 100 tiles with printed letters to form words on a 15 x 15 grid with certain "premium" squares to accumulate points. The words are formed across and down in a crossword fashion. The name Scrabble is a trademark of Hasbro, Inc. in the US and Canada and of J. W. Spear & Sons PLC elsewhere.
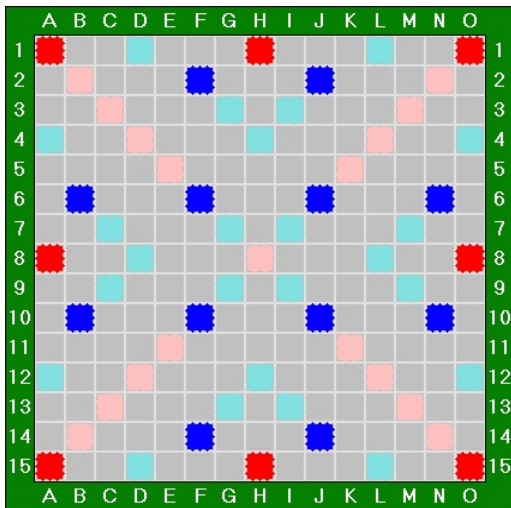
The premium squares are denoted as follows:
Pink - double word score
Red - triple word score
Light Blue - double letter score
Dark Blue - triple letter score

Each letter is worth a set number of points as follows:

Your job in this problem is to find the value of each of the first five words played in a game of scrabble.

"Premium" squares can only be used once, by the word that is placed on it the first time. If seven letters are played, during one play, an additional bonus of 50 is added to the score.

The input file (**DATA21.txt** for the first submission and **DATA22.txt** for the second submission) will contain five sets of data. Each set will provide information about each of the five words played in the game. Each set will contain 4 lines of data. The first line will contain the column (*A - O*) that the first tile of the word is played on. The second line will contain the row (*1 - 15*) that the first tile of the word is played on. The third line will contain either of the words *ACROSS* or *DOWN*, indicating the direction the word will be played. The fourth line will contain the letters that are played, in the order that they are played. The fourth line will contain at least two letters and at most seven letters. Assume all words played will be valid.

The output file (**OUT21.txt** for the first submission and **OUT22.txt** for the second submission) will contain five lines of data. Each line will contain the scored earned by the word played.

Note for Scrabble enthusiasts: "blanks" will not be played.

If you need to understand the rules of Scrabble visit:
http://www.thepixiepit.co.uk/scrabble/rules.html
OR
http://www.hasbro.com/scrabble/pl/page.rules/dn/home.cfm

Sample Input	Sample Output
H 8 ACROSS DWITE L 9 DOWN ASY H 3 DOWN SCORE K 9 ACROSS OTS A 3 ACROSS PROBLEM	20 7 12 7 84

Analysis of sample input

DWITE - D[2] + W[4] + I[1] + T[1] + E[1 * 2 (double letter score)] = 10
         10 * 2 (double word score) = 20
ASY -   E[1] + A[1] + S[1] + Y[4] = 7
SCORE - S[1] + C[3 * 2(double letter score)] + O[1] + R[1] + E[1] + D[2] = 12
OTS -   O[1] + A[1] + T[1 * 2(double letter score)] + S[1] + T[1] + O[1] = 7
         (this play created two words OATS (across) and TO (down)
PROBLEM - P[3] + R[1] + O[1] + B[3] + L[1] + E[1] + M[3 * 2 (double letter score)] + S[1] = 17
           7 * 2 (double word score) = 34
           34 + 50 (playing seven letters) = 84