



Problem of the Week

Problem A

Scrabble Words

Scrabble™ is a game where players place tiles containing individual letters on a board to form words. The board is divided up into squares, and each letter in a word is placed in adjacent squares in a row (reading from left to right) or a column (reading from the top down). Each letter has a point value, and a player’s score for placing a word on the board is the sum of the point values for the letters in the word. The point values for each letter are in the following table.

Letter	A	B	C	D	E	F	G	H	I	J	K	L	M
Value	1	3	3	2	1	4	2	4	1	8	5	1	3
Letter	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
Value	1	1	3	10	1	1	1	1	4	4	8	4	10

In the Scrabble board shown, the coloured squares have special values.

Blue squares, marked **B** on the board, are double letter squares, which means if you put a tile on that square, then the letter is worth twice as many points.

Grey squares, marked **G** on the board, are triple letter squares, which means if you put a tile on that square, then the letter is worth three times as many points.

Red squares, marked **R** on the board, are double word squares, which means if you put a tile on that square, then the whole word is worth twice as many points.

Orange squares, marked **O** on the board, are triple word squares, which means if you put a tile on that square, then the whole word is worth three times as many points.

Double and triple letter scores are calculated before the double and triple word scores.

G				G	
	R				
		R			B
			R		
G				R	
		B			O

- (a) How many points would the word EXACT be worth if you put the first letter in the first row and second column, and place the word horizontally across the board?
- (b) How many points would the word DEBUT be worth if you put the first letter in the second row and second column, and place the word vertically on the board?
- (c) How many points would the word CHEF be worth if you put the first letter of the word in the last column and third row, and place the word vertically on the board?