

[Courseware \(/courses/MITx/6.00x/2012_Fall/courseware/\)](/courses/MITx/6.00x/2012_Fall/courseware/)[Course Info \(/courses/MITx/6.00x/2012_Fall/info/\)](/courses/MITx/6.00x/2012_Fall/info/)[Textbook \(/courses/MITx/6.00x/2012_Fall/book/0/\)](/courses/MITx/6.00x/2012_Fall/book/0/)[Discussion \(/courses/MITx/6.00x/2012_Fall/discussion/forum/\)](/courses/MITx/6.00x/2012_Fall/discussion/forum/)[Wiki \(/courses/MITx/6.00x/2012_Fall/course_wiki/\)](/courses/MITx/6.00x/2012_Fall/course_wiki/)[Progress \(/courses/MITx/6.00x/2012_Fall/progress/\)](/courses/MITx/6.00x/2012_Fall/progress/)

W D SC S : 10.0 P I TS

The first step is to implement some code that allows us to calculate the score for a single word. The function

`getWordScore` should accept as input a string of lowercase letters (a word) and return the integer score for that word, using the game's scoring rules.

Reminder of the scoring rules

Scoring

- The score for the hand is the sum of the scores for each word formed.
- The score for a word is the sum of the points for letters in the word multiplied by the length of the word plus 0 points if all letters are used on the first word created.
- Letters are scored as in scrabble: `e` is worth 1, `i` is worth 3, `s` is worth 3, `r` is worth 2, `n` is worth 1, and so on. We have defined the dictionary `SCRABBLE_LETTER_VALUES` that maps each lowercase letter to its Scrabble letter value.
- For example, `'weed'` would be worth 32 points ($(4 + 1 + 1 + 2) \times 4 = 32$). Be sure to check that the hand actually has 1 `w`, 2 `e`'s, and 1 `d` before scoring the word.
- As another example, if `n=4` and you make the word `'wabbit'` on the first try, it would be worth 10 points: the base score for `'wabbit'` is $4 + 1 + 4 + 3 + 1 + 1 + 1 = 15$, plus an additional 0 point bonus for using all letters.

- You may assume that the input `word` is always either a string of lowercase letters, or the empty string `''`.
- You will want to use the `SCRABBLE_LETTER_VALUES` dictionary defined at the top of `ps4a.py`. You should not change its value.
- Do **not** assume that there are always 7 letters in a hand. The parameter `n` is the number of letters required for a bonus score (the maximum number of letters in the hand). The goal is to keep the code modular if you want to try playing your word game with `n=10` or `n=4`, you will be able to do it by simply changing the value of `HAND_SIZE`.
- Testing:** If this function is implemented properly and you run `test_ps4a.py`, you should see that the `test_getWordScore()` tests pass. Also test your implementation of `getWordScore`, using some reasonable English words.

Paste the code for `getWordScore` in `ps4a.py` and be sure you've passed the appropriate tests in `test_ps4a.py` before pasting your function definition here.

```

1 def getWordScore(word, n):
2     """
3     Returns the score for a word. Assumes the word is a valid word.
4
5     The score for a word is the sum of the points for letters in the
6     word, multiplied by the length of the word, PLUS 50 points if all n
7     letters are used on the first turn.
8
9     Letters are scored as in Scrabble; A is worth 1, B is worth 3, C is
10    worth 3, D is worth 2, E is worth 1, and so on (see SCRABBLE_LETTER_VALUES)
11
12    word: string (lowercase letters)
13    n: integer (HAND_SIZE; i.e., hand size required for additional points)
14    returns: int >= 0
15    """
16

```

Test results

CORRECT

Check

Save

You have used 1 of 30 submissions

Show **sc ss o**

New Post



© 2012 edX, some rights reserved.

[terms of service \(/tos\)](#) [privacy policy \(/privacy\)](#) [honor code \(/honor\)](#) [help \(/help\)](#)