Tuesday Sep 10, 2024

Name:

Discuss and complete the following questions with the person nearest you. You **may** be asked to share your thoughts with the class.

1. Your aim is to write a function that calculates your weekly pay called `calculatePay`. Your function should take three parameters representing: hourly rate, hours worked, and overtime hours. Overtime pay is **1.5** times your hourly rate. For example, `calculatePay(7.40, 40, 10)` must return `407.0`.

2. Write a function called `randPow` which takes two arguments that are ints. The first argument is raised to a random number between `0` and the second argument. For example, `randPow(2, 4)` may return `8`.

3. Imagine you are really into running. You want to apply your new computer science knowledge to build a program to help you determine your average mile pace over a week of running. Sketch out a possible algorithm on a piece of paper or on a whiteboard with the people near you. Note, this is at the algorithm level not the implementation level, so you **should not** be writing python code. Rather, articulate the information you need, the steps your computation should do, and what types of functions you will need (for example).

4. Write a function called `countVowels` that takes as input a string. The program should return the number of vowels in the word. In `main` determine the percentage of the word that is a vowel.

Hint: Consider the following code snippet

```python
s = 'ab'
print(s.count('a')) # should be 1
print(len(s)) # should be 2
```