

CS 457 Homework 5: Functions
for Mon Sep 14 2026

These are some suggestions to help you prepare for quiz 5. As emphasized in class, in addition to our PfDA textbook and the tutorials posted on **piazza**, you are encouraged to make use of whatever learning resources work for you, for example: a collaborative study group, the online Python docs, conversing with AI. (As always keep in mind that not every on-line source is authoritative.)

1. Write a function that takes a temperature in Fahrenheit and returns the equivalent in Celsius.
2. You previously wrote a code to calculate the mean of a list of numbers. Make that code into a function, so you can pass it a list and get back the mean.
3. Make a function that, given a list of numbers and a threshold, returns how many numbers are $\geq$ the threshold.
4. Make a function that, given a list of numbers, returns the index of the maximum. For example, if the third number in the list is the largest, it will return 2.
5. Write a function that takes 1) a list containing someone's steps-per-day for the last several days and 2) that person's daily step goal and then uses your previous functions to print a little report such as:

```
Average steps: 8,668
Days over goal: 3
Best day: day 6 (15,032 steps)
```

6. Write a function that takes an integer and returns **True** if it's prime, **False** otherwise. (Hint: check whether any number from 2 to $n - 1$ divides n .)
7. Write a function that, given a list of numbers, uses your previous function to return a list of those that are prime.
8. Write a function that, given a list of numbers, returns a list of the indices of those that are prime (ie, the index of where the numbers are in the original list).
9. In hw3, you wrote some Python code to compute the scrabble score of a word. Make that code into a function, so you can pass it a word and get back the score.
10. I posted code on **piazza** for a function that fetches a list of English words off the internet. Write a program that uses this function and the previous one to find the English word with the highest scrabble score.
11. Write a function that, given a word, finds all words that are anagrams of it (same letters in a different order). (Hint: use the **normalize_word** function on **piazza** to transform words to a standard format.)