Do the following problems.

DO NOT use language we have not learned in class. There are often multiple solutions, and especially if you use the helpdesk, if they guide you toward a solution you have never seen before, DO NOT use it. ASK ME if there is any doubt.

Section 1:

(a) Ask the user the enter a float, and assign it into the variable x. Write an if statement that assigns 20 to the variable y and assigns 40 to the variable z if the variable x is greater than 100.
(b)Ask the user to enter an integer, and assign it to the variable a. Write an if-else statement that assigns zero to the variable b if the variable a is less than 10. Otherwise it should assign 99 to the variable b
(c) Look at the code below. It contains code that has been written without the proper alignment and indentation. Please correct it. Add in a call to the input function that asks the user to enter their score in the range 0-100. Use the score to execute the code. Also add in definitions for the A_score, B_score, C_score and D_score, as the values 90, 80, 70 and 60 respectively.
DO NOT edit the code in any way other than to add correct indentation, define the variables, and ask for the score..

```
if score >= A_score:
    print('Your grade is A')
    else:
    if score >= B_score:
    print('Your grade is B')
    else:
    if score >= C_score:
    print('Your grade is C')
    else:
    if score >= D_score:
    print('Your grade is D')
    else:
    print('Your grade is F')
```

(d) Ask the user to enter amount1 and amount2. Write a nested set of selection statements that perform the following. If amount1 is greater than 10 and amount2 is less than 100, display the greater of amount1 and amount2. Do NOT print anything else.
(e) Ask the user to enter their speed. Write an if-else statement that displays 'speed is normal' if the speed variable is within the range of 24 to 56 (inclusive). If the speed variable is outside this range, display 'speed is abnormal'.

Section 2.

1. The area of a rectangle is length times width. Write a program that asks for the length and width of two rectangles. The program should tell the user which rectangle has the greater area, or if the rectangles areas are the same
2. Write a program that asks the user to enter a person's age. The program should display a message indicating whether the person is an infant, a child, a teenager or an adult. The following are guidelines:
    - If the person if 1 year old or less, they are an infant
    - Older than 1, younger than 13, they are a child
    - At least 13 but less than 20, they are a teenager
    - 20 or older, they are an adult
3. The colors red, blue and yellow are primary colors. When you mix two primary colors, you get a secondary color, as below:
    - red and blue, you get purple
    - red and yellow, you get orange
    - blue and yellow, you get green
    - Write a program that asks the user for two primary colors as strings, and prints the result. If the input is anything other than red, blue or yellow, the program should display an error message, otherwise it should display the color created.
4. Imagine you live in the world of Harry Potter where the money they use is knuts, sickles and galleons. Write a program that will convert a given number of knuts to sickles and galleons. Ask the user to enter a number of knuts, and print the corresponding number of sickles and galleons. There are 29 knuts in one sickle, and 17 sickles in one galleon. Print ONLY non-zero values. So if there are not enough knuts for one sickle, then "0 sickles" should not be printed. DO NOT PRINT ANY FLOATS.

Example:
Enter the number of knuts: 27
You have 27 knut(s)

Example:
Enter the number of knuts: 29
You have 1 sickle(s)

Example:
Enter the number of knuts: 31

You have 1 sickle(s) 2 knut(s)

Example:
Enter the number of knuts: 493
You have 1 galleon(s)

Example:
Enter the number of knuts: 524
You have 1 galleon(s) 1 sickle(s) 2 knut(s)

HINT: On paper, work out how you're going to do this conversion. Think about dollars, quarters and cents. If I give you 3752 cents, how do you figure out how many dollars that is, how many quarters left over and how many cents: In this case 37 dollars, 2 quarters and 2 cents. No floats should be printed. HINT: For this last one, THINK carefully about the structure of the code requiredType up your answers, and submit your .py file through Nexus. For python code, I expect to see:

1. Code listing (with comments)