

## Assignment - #2:

All the codes need to have proper comments and explanation. Please show screen shot for the output.

1. If you are given three sticks, you may or may not be able to arrange them in a triangle. For example, if one of the sticks is 12 inches long and the other two are 1-inch-long, you will not be able to get the short sticks to meet in the middle. For any given three values, there is a simple test to see if it is possible to form a triangle: if any variable is greater than the sum of the other two, then you cannot form a triangle using the three values. Otherwise, you can.
  - a. Write a function named **is\_triangle** that takes three integers as arguments, and that returns True or False, depending on whether you can or cannot form a triangle from sticks with the given lengths.
  - b. Write a function named **start\_triangle\_check** that prompts the user to input three stick lengths, converts them to integers, and uses **is\_triangle** to check whether sticks with the given lengths can form a triangle.

2. You have just recently been hired to calculate scores for a Dart Board game! Write a function **scoreThrows()** that accepts any number of radiuses (can be integers), and returns a total score using the below specification.

**Scoring specifications:**

0 points - radius above 10

5 points - radius between 5 and 10 inclusive

10 points - radius less than 5

If all radiuses are less than 5, award 100 BONUS POINTS!

An empty input should return 0.

**Expected Output:**

scoreThrows() => returns 0

scoreThrows(1, 5, 11) => returns 15

scoreThrows(15, 20, 30) => returns 0

scoreThrows(1, 2, 3, 4) => returns 140

scoreThrows(1, 2, 3, 4, 5, 6, 7, 8, 9) => returns 65

3. The Hidden Word: Maya writes weekly articles for a well-known magazine, but she is missing one word each time she is about to send the article to the editor. The article is not complete without this word. Maya has a friend, Dan, and he is very good with words, but he does not like just to give them away. He texts Maya a number, and she needs to find out the hidden word.

The words can contain only the letters:

"a", "b", "d", "e", "i", "l", "m", "n", "o", and "t".

Luckily, Maya has the key:

"a" - 6, "b" - 1, "d" - 7, "e" - 4, "i" - 3, "l" - 2, "m" - 9, "n" - 8, "o" - 0, and "t" - 5

Write a function **hidden(num)** which accepts number and returns the hidden-word which is missing.

**Expected Output:**

Expected '637' to return 'aid'

Expected '7468' to return 'dean'

Expected '49632' to return 'email'  
Expected '1425` to return 'belt'  
Expected '6250` to return 'alto'

Expected '12674` to return 'blade'  
Expected '4735` to return 'edit'  
Expected '7345` to return 'diet'  
Expected '3850` to return 'into'  
Expected '2394` to return 'lime'  
Expected '2068` to return 'loan'  
Expected '137` to return 'bid'  
Expected '1065` to return 'boat'  
Expected '6509` to return 'atom'  
Expected '3549` to return 'item'  
Expected '5394` to return 'time'  
Expected '56124` to return 'table'  
Expected '968` to return 'man'  
Expected '103247` to return 'boiled'  
Expected '67935` to return 'admit'  
Expected '7415` to return 'debt'  
Expected '2687` to return 'land'  
Expected '261` to return 'lab'  
Expected '8054` to return 'note'  
Expected '942547` to return 'melted'