**Question 2:**

**A) Issues;**

1. Using from math import \* imports all functions and constants from the math module, which can lead to namespace pollution.
2. The code does not show where x is defined or its value.

Improved Code:

import math

x = 4.7 # Example value

x = math.ceil(x)

**B) Issues;**

1. Using range(len(list\_of\_fruits)) is not Pythonic and can be replaced with direct iteration over the list.

Improved Code:

list\_of\_fruits = ["apple", "pear", "orange"]

for fruit in list\_of\_fruits:

process\_fruit(fruit)

**C) Issues;**

1. The formatting is not following PEP8 guidelines.
2. The code is mostly fine, but it could benefit from type hints and a string representation method.

Improved Code:

class Rectangle:

def \_\_init\_\_(self, height: float, width: float):

self.height = height

self.width = width

def area(self) -> float:

return self.height \* self.width

**D) Issues;**

1. Including <bits/stdc++.h> is not recommended for production code as it increases compile time and includes unnecessary headers.
2. The use of new without a corresponding delete can lead to memory leaks.
3. Unused pointer ptr.
4. Using “using namespace std”; is generally discouraged as it can lead to name conflicts.

Improved Code:

#include <iostream>

void do\_something()

{

int value = 10;

// some math operations

return;

}

int main()

{

do\_something();

return 0;

}