Problem 1-1. Show the result of evaluating each expression. Be sure that the value is in the proper form to indicate its type (int, or float). If the expression is illegal, explain why.

float (a) 4.0/10.0+3.5\*2=7.4

float(b) 10%4+6/2=5.0

float(c) (6.5-5.0)\*\*(0.5)+7\*3 =22.22474487139159

float(d) 3\*10/3+10%3=11.0

(e) 5/(1//2) the expression is illegal,because it cannot division zero

Problem 1-2. What is the exact result of each of the following when evaluated?

(a) 12/6.0=2.0

(b) 21 // 10=2

(c) 25 // 10.0=2.0

(d) 12/6=2.0

Problem 1-3. Given a quadratic equation, 𝑎𝑥􏰀 􏰁 𝑏𝑥 􏰁 𝑐 􏰂 0, the two roots are:

𝑥􏰃 􏰂􏰄𝑏􏰁√𝑏􏰀 􏰄4𝑎𝑐, 2𝑎

What are the problems with the following program?

𝑥􏰀 􏰂􏰄𝑏􏰄√𝑏􏰀 􏰄4𝑎𝑐 .

a=2

b=5

c=2

q = b\*b - 4\*a\*c

q\_sr = q \*\* (1//2)

x1 = (-b + q\_sr)/2\*a

x2 = (-b - q\_sr)/2\*a

print("x1,' x1, "x2=" x2)

Modify the program so that it can output the correct x1 and x2 by solving the given equation.

ans:

a=2

b=5

c=2

q = b\*b - 4\*a\*c

q\_sr = q \*\* (0.5)

x1 = (-b + q\_sr)/(2\*a)

x2 = (-b - q\_sr)/(2\*a)

print("x1=", x1, "x2=",x2)