1. In Listing 5.4 (addnonnegatives.py) could the condition of the if statement have used > instead of>= and achieved the same results? Why?

2. In Listing 5.4 (addnonnegatives.py) could the condition of the while statement have used > insteadof >= and achieved the same results? Why?

3. In Listing 5.4 (addnonnegatives.py) what would happen if the statemententry = int(input()) # Get the valuewere moved out of the loop? Is moving the assignment out of the loop a good or bad thing to do?Why?

4. How many asterisks does the following code fragment print? 100

5. How many asterisks does the following code fragment print? infinity

6. How many asterisks does the following code fragment print? 0

7. How many asterisks does the following code fragment print? 550

8. How many asterisks does the following code fragment print? 20

9. How many asterisks does the following code fragment print? infinity

10. How many asterisks does the following code fragment print? infinity

11. What is minimum number of arguments acceptable to the range expression? 1

12. What is maximum number of arguments acceptable to the range expression? 3

13. Provide the exact sequence of integers specified by each of the following range expressions.

(a) range(5) 0,1,2,3,4

(b) range(5, 10) 5,6,7,8,9

(c) range(5, 20, 3) 5,8,11,14,17

(d) range(20, 5, -1)20,19,18,17,16,15,14,13,12,11,10,9,8,7,6

(e) range(20, 5, -3) 20,17,14,11,8

(f) range(10, 5) nothing

(g) range(0) nothing

(h) range(10, 101, 10) 10,20,30,40,50,60,70,80,90,100

(i) range(10, -1, -1) 10,9,8,7,6,5,4,3,2,1,0

(j) range(-3, 4) -3,-2,-1,0,1,2,3

(k) range(0, 10, 1) 0,1,2,3,4,5,6,7,8,9

14. What is a shorter way to express range(0, 5, 1)? range(0, 5)

15. Provide an equivalent Python range expression for each of the following integer sequences.

(a) 1,2,3,4,5 range(0, 6)

(b) 5,4,3,2,1 range(6, 0,-1)

(c) 5,10,15,20,25,30 range(5, 31,5)

(d) 30,25,20,15,10,5 range(30, 4,-5)

(e) −3,−2,−1,0,1,2,3 range(-3, 4)

(f) 3,2,1,0,−1,−2,−3 range(3, -4,-1)

(g) −50,−40,−30,−20,−10 range(-50, -9,10)

(h) Empty sequence range(0)

16. If x is bound to the integer value 2, what integer sequence does range(x, 10\*x, x) represent?

2,4,6,8,10,12,14,16,18

17. If x is bound to the integer value 2 and y is bound to the integer 5, what integer sequence does range(x, x + y) represent?

2,3,4,5,6

18. Is it possible to represent the following sequence with a Python range expression: 1,−1,2,−2,3,−3,4,−4? yes with if and print in if can do it

19. How many asterisks does the following code fragment print? 100

20. How many asterisks does the following code fragment print? 16

21. How many asterisks does the following code fragment print? 50

22. How many asterisks does the following code fragment print? 0

23. How many asterisks does the following code fragment print? 200

24. How many asterisks does the following code fragment print? 20

25. Rewrite the code in the previous question so it uses a while instead of a for. Your code shouldbehave identically.

j=-100

while(j<100):

print('\*',end='')

j+=10

26. What does the following code fragment print?

number betwaen 0 and 100 with 0

27. Rewrite the code in the previous question so it uses a for instead of a while. Your code shouldbehave identically.

for a in range(0,100):

print(a)

28. What is printed by the following code fragment?

nothing

29. Rewrite the following code fragment using a break statement and eliminating the done variable.your code should behave identically to this code fragment.

n, m = 0, 100

while True and n != m:

n = int(input())

if n < 0:

break

print("n =", n)

30. Rewrite the following code fragment so it eliminates the continue statement. Your new code’s logicshould be simpler than the logic of this fragment.

31. What is printed by the following code fragment?

print number betwean 0 and 100 with 0 in first and one space betwean numbers

32. Write a Python program that accepts a single integer value entered by the user. If the value entered isless than one, the program prints nothing. If the user entersa positive integer, n, the program printsan n×n box drawn with \* characters. If the users enters 1, for example, the program prints

\*

If the user enters a 2, it prints

\*\*

\*\*

An entry of three yields

\*\*\*

\*\*\*

\*\*\*

and so forth. If the user enters 7, it prints

\*\*\*\*\*\*\*

\*\*\*\*\*\*\*

\*\*\*\*\*\*\*

\*\*\*\*\*\*\*

\*\*\*\*\*\*\*

\*\*\*\*\*\*\*

\*\*\*\*\*\*\*

that is, a 7×7 box of \* symbols.

number = int(input())

for \_ in range (0,number):

for \_ in range (0,number):

print("\*",end='')

print()

33. Write a Python program that allows the user to enter exactly twenty floating-point values. The pro gram then prints the sum, average (arithmetic mean), maximum, and minimum of the values entered.

number = int(input())

min = number

max = number

i=0

resaul = 0

while(i < 19):

number = int(input())

if(number > max):

max = number

if(number<min):

min = number

resaul = resaul + number

i+=1

print("sum is:",resaul,"\navrage is:",resaul/2,"\nminimom is:",min,"\nmaximom is:",max)

34. Write a Python program that allows the user to enter any number of nonnegative floating-point values.The user terminates the input list with any negative value. The program then prints the sum, average(arithmetic mean), maximum, and minimum of the values entered. The terminating negative value isnot used in the computations.

number = float(input())

min = number

max = number

resaul = 0

while(number > 0):

number = float(input())

if(number < 0 ):continue

if(number > max):

max = number

if(number<min):

min = number

resaul = resaul + number

print("sum is:",resaul,"\navrage is:",resaul/2,"\nminimom is:",min,"\nmaximom is:",max)

35. Redesign Listing 5.34 (startree.py) so that it draws a sideways tree pointing right; for example, if theuser enters 7, the program would print

number = int (input("number for stars pattern:"))

for i in range (0, number):

for j in range(0,i+1):

print("\*",end='')

print()

for a in range (number-1,0,-1):

for b in range (a,0,-1):

print("\*",end='')

print()

36. Redesign Listing 5.34 (startree.py) so that it draws a sideways tree pointing left; for example, if the

user enters 7, the program would print

number = int(input("use ure numbers for stas pattern:"))

space = number

for i in range (0,number):

for j in range (space-1, 0,-1):

print(" ",end="")

for a in range (0,i+1):

print("\*",end="")

print()

space -=1

for i\_2 in range (0,number-1):

for j\_2 in range (0,i\_2+1):

print(" ",end='')

for a\_2 in range (i\_2,number-1):

print("\*",end="")

print()