Q1)

def valuesHaveTheSameSign(x, y):

if x>=0 and y>=0:

return True

elif x<0 and y<0:

return True

else:

return False

Q2)

def coordinatesInSameQuadrant(x1, y1, x2, y2):

if x1 >= 0 and y1 >= 0 and x2>=0 and y2>=0:

return True

elif x1 <0 and y1<0 and x2<0 and y2<0:

return True

elif x1 > 0 and x2 > 0 and y1 <0 and y2 < 0:

return True

elif y1 > 0 and y2 > 0 and x1 <0 and x2 < 0:

return True

return False

Q3)

def strict(x, y, z, strict):

if strict ==False:

if x<=y<=z:

return True

else:

return False

elif strict == True:

if x<y<z:

return True

else:

return False

Q4)

def closerToTarget(x, y, target):

d = {x : (target-x), y: (target-y)}

if d[x] < 0:

d[x] = d[x]\*-1

if d[y] < 0:

d[y] = d[y] \* -1

if d[x] < d[y]:

return x

elif d[x] > d[y]:

return y

elif d[x] == d[y]:

return min(x,y)

Q5)

def removeCenterCharacters(s):

l = list(s)

length = len(l)

if length < 3:

return "".join(l)

elif length%2 == 0:

l.remove(l[length//2])

l.remove(l[(length//2)-1])

return "".join(l)

else:

l.remove(l[length//2])

return "".join(l)

Q6)

def firstPositionDiffer(s, t):

j = 0

count = 0

if (len(s) == len(t)):

for i in range(0,len(s)):

if s[i] == t[j]:

count = count + 1 # i am counting to know whether all the chars are identical in the same position

else:

return i

j = j+1

if count == len(s):

return -1

Q7)

def allPositionsOfT(s, t):

lt = len(t)

ans = [ ]

for i in range(0,len(s)):

if s[i:i+lt] == t:

ans.append(i)

if i+lt == len(s):

break

return ans

8Q)

def removeAllOccurrences(s, t):

sl = list(s)

tl = list(t)

ans = [ ]

for i in range(0,len(tl)):

ans.append(sl.count(tl[i]))

for i in range(0,len(ans)):

for j in range(0,ans[i]):

sl.remove(tl[i])

return "".join(sl)

9Q)

def positionOfFirstLargest(arr):

maxi = arr[0]

for i in range(1,len(arr)):

if arr[i] > maxi:

maxi = arr[i]

for i in range(0,len(arr)):

if arr[i] == maxi:

return i

10Q)

def positionOfLastLargest(arr):

maxi = arr[0]

for i in range(1,len(arr)):

if arr[i] > maxi:

maxi = arr[i]

for i in range(len(arr)-1,-1,-1):

if arr[i] == maxi:

return i

11Q)

def countNegatives(lst):

count = 0

for i in range(0,len(lst)):

if lst[i]<0:

count = count+1

return count

12Q)

def countInRange(arr, a, b):

count = 0

for i in range(0, len(arr)):

if arr[i] >= a and arr[i] <= b:

count = count+1

return count