```
# Stress When depth is constant
Q = float (input ("Enter the value of Load in kN: "))
N = int(input ("Number of data values of radial distance: "))
pi = 3.14159265359
Z = float(input ("Depth: "))
r = []
for i in range (1, N+1):
  print("Enter radial distance in m".format (i))
  Value_r = float(input () )
  r.append(Value_r)
  Stress = ((3*Q)/(2*pi*Z*Z) ) * (((1/(1+((Value_r/Z) **2))))**2.5)
  print("'Stress: ", Stress, "kN/m^2")
```

```
Enter the value of Load in kN: 2500
Number of data values of radial distance: 5
Depth: 6
Enter radial distance in m
1
'Stress:  30.962130445358056 kN/m^2
Enter radial distance in m
2
'Stress:  25.479163627894877 kN/m^2
Enter radial distance in m
3
'Stress:  18.980334491123447 kN/m^2
Enter radial distance in m
4
'Stress:  13.22290223969301 kN/m^2
Enter radial distance in m
5
'Stress:  8.871775810212231 kN/m^2
```

```
# Stress when Radius is Constant
Q = float (input("Enter the value of Load in kN: "))
M= int (input ("Number of data values of depth: "))
pi = 3.14159265359
r = float(input("Radial Distance: "))
Z = []
for j in range (1, M+1):
  print("Enter depth in z".format (j))
  Value_Z = float(input ())
  Z.append(Value_Z)
  Stress = ((3*Q)/(2*pi*Value_Z*Value_Z))*(((1/(1+((r/Value_Z)**2))))**2.5)
  print("'Stress: ", Stress, "kN/m^2")
```

```
Enter the value of Load in kN: 2500
Number of data values of depth: 6
Radial Distance: 5
Enter depth in z
1
'Stress:  0.34629643854273023 kN/m^2
Enter depth in z
2
'Stress:  2.1085135063018074 kN/m^2
Enter depth in z
3
'Stress:  4.781320614736756 kN/m^2
Enter depth in z
4
'Stress:  7.0974399578803125 kN/m^2
Enter depth in z
5
'Stress:  8.440465463972316 kN/m^2
Enter depth in z
6
'Stress:  8.871775810212231 kN/m^2
```

```
# Calculating the stress by Boussineq's Theory
Q= int(input("Enter the value of given load :"))
z= int(input("Enter the distance of vertical stress :"))
r= int(input("Enter the distance ofhoriznta stress:"))
stress = ((3*Q*(1/(1+(r/z)**2)) **2.5))/(2*3.14*(z**2))
print("The value of stress is", stress)
```

```
Enter the value of given load :2500
Enter the distance of vertical stress :6
Enter the distance ofhoriznta stress:5
The value of stress is 8.876275703713446
```