```
#jidnyasa
#To Calculate the length of transition curve
V= int(input("Enter the value of design speed: "))
R= int(input("Enter the value of Radius of curvature: "))
N= int(input("Enter the value of slope: "))
W= float(input("Enter the value of width of road including
extra widening: "))
emax=float(input("'enter the value for plain terain:"))
`
print("The value of Super elevation:",ecal)
if ecal<emax:
  print(ecal)
else:
  print(emax)
Ls=(emax*N*W/2)
print("The length of transition curve:", Ls)
```

Output:-

```
Enter the value of design speed: 65
Enter the value of Radius of curvature: 220
Enter the value of slope: 150
Enter the value of width of road including extra widening: 7.5
'enter the value for plain terain:0.07
The value of Super elevation: 0.08535353535353535
0.07
The length of transition curve: 39.37500000000001
```

```
#jidnyasa
R = int(input(" Constant R: "))
C = int (input (" Constant C: "))
import numpy as geek # Added spaces for correct import
A = int(input ("Total Data Values for EWL Constant: "))
B = int(input ("Total Data Values for AADT: "))
EWL_Constant = [] # Corrected variable name
AADT = []
for i in range (A): # Corrected loop variable
  print("Enter EWL Constant:")
  ewl_val = float (input()) # Used a different variable for
input
  EWL_Constant.append(ewl_val) # Appended the input value
for j in range (B): # Corrected loop variable
  print("Enter AADT: ")
  aadt_val = float (input ())
  # Used a different variable for input
  AADT.append (aadt_val)
  # Appended the input value
product = geek.dot (EWL_Constant, AADT)
# Corrected variable name
# print(" Dot Product")
# This line was commented out
Total_EWL = product
# Corrected variable name
print(" Total EWL :", Total_EWL)
# Corrected variable name
print("EWL after 60 years :", Total_EWL*1.6)
# Corrected variable name
TI = 1.35 * (((1.6 * Total_EWL) + (Total_EWL / 2)) ** 0.11)
# Corrected variable names and calculation
print ("Traffic Index : ", TI)

# Output # Removed the use of "Output" as a variable name
Thickness = 0.166 * TI * (99 - R) / (C ** 0.2)
print ("Pavement Thickness: ", Thickness, "cm")
```

Output:-

```
Constant R: 48
 Constant C: 16
Total Data Values for EWL Constant: 4
Total Data Values for AADT: 4
Enter EWL Constant:
330
Enter EWL Constant:
1070
Enter EWL Constant:
2460
Enter EWL Constant:
4620
Enter AADT:
3750
Enter AADT:
470
Enter AADT:
320
Enter AADT:
120
 Total EWL : 3082000.0
EWL after 60 years : 4931200.0
Traffic Index :  7.577910657490486
Pavement Thickness:  36.847136933326986 cm
```

```
Jidnyasa
P =float (input(" Load in kg: "))
p =float (input (" Tyre pressure kg/cm^2: "))
M = int (input ("Total Number of layers in a given Pavement :
"))
pi = 3.14159
CBR = []
for i in range (1, M+1):
  print ("California Bearing Ratio of Material in %")
  CBR_value = float (input ())
  CBR. append (CBR_value)
  T = ((1.75*P)/ (CBR_value) -(P/(p*pi)) ) **0.5
  print ("Thickness Above this layer: ", T, "cm")

print ("Given that bitumen layer of 4 cm")
```

Output:-

```
Load in kg: 4085
 Tyre pressure kg/cm^2: 7
Total Number of layers in a given Pavement : 3
California Bearing Ratio of Material in %
4.38
Thickness Above this layer:  38.031276487723645 cm
California Bearing Ratio of Material in %
6
Thickness Above this layer:  31.712799015896838 cm
California Bearing Ratio of Material in %
12
Thickness Above this layer:  20.247776538573337 cm
Given that bitumen layer of 4 cm
```