import numpy as np

# Input vectors (x1, x2) and target output y for an AND gate

x1 = np.array([0, 0, 1, 1])

x2 = np.array([0, 1, 0, 1])

y = np.array([0, 0, 0, 1]) # AND gate output

# User inputs for weights and threshold

w1 = int(input('Enter the weight (w1)= '))

w2 = int(input('Enter the weight (w2)= '))

theta = int(input('Enter the threshold (theta)= '))

# Compute the linear combination of inputs

f = x1 \* w1 + x2 \* w2

# Apply threshold function: if f >= theta → 1, else → 0

y\_predict = (f >= theta).astype(int)

# Check if predicted output matches the desired output

if np.all(y == y\_predict):

print('Correct weights and threshold')

print('w1 =', w1)

print('w2 =', w2)

print('threshold =', theta)

else:

print('Incorrect weights/threshold — try different values')