import numpy as np

a, a\_prime = 0, np.pi/4

b, b\_prime = np.pi/8, 3\*np.pi/8

def E(x, y):

return np.cos(2 \* (x - y))

S = abs(E(a, b) - E(a, b\_prime) + E(a\_prime, b) + E(a\_prime, b\_prime))

print("CHSH S =", S)