Jackson Warren

Jeremy Bergen

CSCI 370

11/1/21

Week 9 Assignment

P = 11

Q = 17

n = 11 \* 17 = 187

phi = (11 – 1) \* (17 – 1) = 160

e = 1 < 13 < 187, it is coprime, meaning it has a gcd(13,160) = 1

d = (e^-1)mod(phi)

Therefore, d = 13

m = hi = 89

Public Key: <13,187>

Cyphertext encryption using public key: C = m^emod(n)

C = 89^13mod(187)

C = 89

Private Key: <13, 187>

Cyphertext decryption using private key: m = C^dmod(n)

m = 89^13mod(187)

m = 89 … so it worked I suppose