Q1.

p = 3

q = 11

e = 7

x = 5

n = pq, and phi(n) = (p-1)(q-1)

n = pq = 311 = 33

phi(n) = (p-1)(q-1) = 210 = 20

c = x^e mod n

c = 5^7 mod 33 = 14

decrypt

e = 7 and phi(n) = 20

d = multiplicative inverse of 7 mod 20 = 3.

x = c^d mod n

x = 14^3 mod 33 = 5

Q2.

p = 11

q = 23

e = 7

x = 217

n = pq = 1123 = 253

phi(n) = (p-1)(q-1) = 1022 = 220

(n, e) = (253, 7).

e = 7 and phi(n) = 220

multiplicative inverse of 7 mod 220 = d = 63.

(n, d) = (253, 63).

c = x^e mod n = 217^7 mod 253 = 48

decrypt

x = c^d mod n = 48^63 mod 253 = 217