

$$5) \quad 2^1 = 2 \pmod{13}$$

$$2^2 = 4 \pmod{13}$$

$$2^3 = 8 \pmod{13}$$

$$2^4 = 3 \pmod{13}$$

$$2^5 = 6 \pmod{13}$$

$$2^6 = 12 \pmod{13}$$

$$2^7 = 11 \pmod{13}$$

$$2^8 = 9 \pmod{13}$$

$$2^9 = 5 \pmod{13}$$

$$2^{10} = 10 \pmod{13}$$

$$2^{11} = 7 \pmod{13}$$

$$2^{12} = 1 \pmod{13}$$

2 is generator

order is 12