

<sup>20</sup>  
2. Order is the number of elements. As we have  $\mathbb{Z}_{200}$

$$\# \text{ of elements} = \frac{200}{\gcd(200, 80)}$$

200: 1, 2, 4, 5, 10, 20, (40), 50, 100, 200 (I hope I haven't missed any!)

80: 1, 2, 4, 8, 10, 20, (40), 80.

10 is the  $\gcd(200, 80)$

$$|80| = \frac{200}{40}$$

$$|80| = 5$$

$$\langle 80 \rangle = \{0, 40, 80, 120, 160\}$$

5 ✓

