

Anonymous voting technique

- 19 people hold a vote.
- Pick any number to start (vote overseer only). eg. 1834.
- Vote yes: add 20, pass the new number along
- Vote no: add 1, pass the new number along.
- Vote to abstain: add 0, pass along new number.
- End: Take the final # (eg. 1961).

The difference: $1961 - 1834 = \underline{127}$

How many yes's/no's? abstains?

$$127 = \underbrace{(6)} \cdot 20 + \underbrace{7} = 6 \cdot 20 + 7$$

$20 \overline{)127}$
 6
 —
 120
 —
 7

↑
6
↑
remainder

Division algorithm!