

系所：_____ 學號：_____ 姓名：_____ (5/1)

Find $[29]^{-1}$ in Z_{72} ($\gcd(29, 72) = 1$).

Sol. $5 \times 29 + (-2) \times 72 = 1$.

$$\Rightarrow 5 \times 29 \equiv 1 \pmod{72}$$

$$\Rightarrow [5] \cdot [29] = [5 \times 29] = [1] \text{ in } Z_{72}$$

$$\Rightarrow [29]^{-1} = [5]$$