Consider $\mathbb{Z}_7$.

$$1^{-1} = 1 \qquad \because 1 \cdot 1 = 1 \qquad (1)$$
by Existence of a Multiplicative Identity

$$2^{-1} = 4 \qquad \because 2 \cdot 4 \equiv 1 \pmod 7 \qquad (2)$$

$$3^{-1} = 5 \qquad \because 3 \cdot 5 \equiv 1 \pmod 7 \qquad (3)$$

$$4^{-1} = 2 \qquad \because 4 \cdot 2 \equiv 1 \pmod 7 \qquad (4)$$

$$5^{-1} = 3 \qquad \because 5 \cdot 3 \equiv 1 \pmod 7 \qquad (5)$$

$$6^{-1} = 6 \qquad \because 6 \cdot 6 \equiv 1 \pmod 7 \qquad (6)$$