Trabajando con $\mathbb{Z}_n$ $n \in \mathbb{N}$ $n = 3, 4, 5, 6$

$\mathbb{Z}_n = \{[0], [1], [2], \ldots [n-1]\}$

$n=5$ $\mathbb{Z}_5 = \{[0], [1], [2], [3], [4]\}$

150 $150 \mid 5$ $[0] \in \mathbb{Z}_5$

$77 \mid 5$ $77 \in \mathbb{Z}_5$

$\mathbb{Z}_3 = \{[0], [1], [2]\}$

$[p] + [q] = [p+q]$ $[p] \cdot [q] = [p \cdot q]$

$\mathbb{Z}_3 = \{[0], [1], [2]\}$

+	0	1	2
0	0	1	2
1	1	2	0
2	2	0	1

·	0	1	2
0	0	0	0
1	0	1	2
2	0	2	1

$[3] = [0]$

$3 \mid 1$ $[4] = 1$ $\mathbb{Z}_3 \rightarrow$ Es un cuerpo

$4 \mid 1$

$[-1] = [2]$

$-1 \mid 3$

2

$\mathbb{Z}_4 = \{[0], [1], [2], [3]\}$

+	0	1	2	3
0	0	1	2	3
1	1	2	3	0
2	2	3	4	1
3	3	0	1	2

·	0	1	2	3
0	0	0	0	0
1	0	1	2	3
2	0	2	0	2
3	0	3	2	1

$4 \mid 4$ $5 \mid 4$ $6 \mid 4$ $3 \mid 4$

0 1 2 3

$\mathbb{Z}_4 \rightarrow$ No es un cuerpo

$\mathbb{Z}_5$

+	0	1	2	3	4
0	0	1	2	3	4
1	1	2	3	4	0
2	2	3	4	0	1
3	3	4	0	1	2
4	4	0	1	2	3

·	0	1	2	3	4
0	0	0	0	0	0
1	0	1	2	3	4
2	0	2	4	0	3
3	0	3	1	4	2
4	0	4	3	2	1

$5 \mid 5$ $6 \mid 5$ $7 \mid 5$ $8 \mid 5$ $9 \mid 5$ $12 \mid 5$ $15 \mid 5$

0 1 2 3 4 $10\ 2$ $15\ 0$

2 1

$\mathbb{Z}_5 \rightarrow$ Es un cuerpo

$\mathbb{Z}_n \rightarrow$ Es un cuerpo si n es un primo