

Rings:
 $M_2(2\mathbb{Z})$

Commutative Rings:

$$\left\{ \begin{pmatrix} 2n & 0 \\ 0 & 2m \end{pmatrix} \mid n, m \in \mathbb{Z} \right\}$$

Integral Domains:

$2\mathbb{Z}$

\mathbb{Z}_6

$\mathbb{Z}[i\sqrt{2}]$

Unique Factorization Domains:

\mathbb{Z}

Fields:

$\mathbb{R}, \mathbb{C}, \mathbb{Z}_p$

Division Rings:

The Real Quaternions

Rings with a unit (Scales):

$M_2(\mathbb{R})$