$$\boxed{\textbf{1.   Linear dynamical systems}}$$

Linear

Let:

· $(\mathbb{R}^n, f)$ euclidean functional dynamical system

Then, $(\mathbb{R}^n, f)$ is linear if:

· $\exists A \in \mathcal{M}_{n \times n}(\mathbb{R})$:

· $\forall x \in \mathbb{R}^n$:

· $f(x) = Ax$