**Theorem** For all $n \in \mathbb{N}$:

$$\sum_{i=0}^{n} i = \frac{n(n + 1)}{2}$$

**Theorem** For all $n \in \mathbb{N}$:

$$\sum_{i=0}^{n} i^2 = \frac{n(n + 1)(2n + 1)}{6}$$

**Theorem** (Divergence theorem) For any volume $V$ and continuously differentiable vector field $F$:

$$\iiint_{V} \nabla \cdot F \, dV = \iint_{\partial V} F \cdot dS$$

where $\partial V$ is the border of $V$.

**Definition** (Fibonacci sequence) Let $u_n$ be the sequence defined by:

$$\begin{cases} 
    u_0 & = 1 \\
    u_1 & = 1 \\
    u_{n+2} & = u_{n+1} + u_n, \ \forall n \in \mathbb{N} 
\end{cases}$$

**Theorem** For all $n \in \mathbb{N}$:

$$u_n = \frac{\phi^n - \psi^n}{\phi - \psi}$$

where $\phi$ and $\psi$ are the roots of $x^2 - x - 1$. 

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