Rational Mechanics

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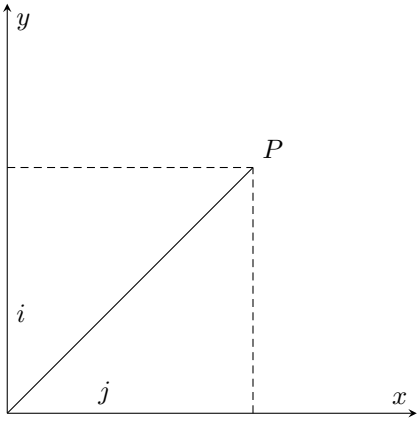
November 2, 2022

Central Movements

Let $\vec{a} = f(\|P - O\|)(P-O)$, where we suppose to have a function $f : A \subseteq \mathbb{R} \to \mathbb{R}$ that every time the acceleration is proportional to the movement $P - O$ we will have a central movement.

Example



We define: $\vec{a} = -\omega^2(P - O)$ with $\omega^2 > 0$ where $P - O$ is the movement vector in the central movement. So we can express the acceleration with the following equation:

$$\vec{a} = \ddot{x}i + \ddot{y}j$$