



$\frac{1}{x^2} = x^{-2}$

1. $\frac{1}{x^2} = x^{-2}$, $\frac{d}{dx} x^{-2} = -2x^{-3} = -\frac{2}{x^3}$

2. $\frac{d}{dt} \left(\frac{1}{2} m v^2 \right) = \frac{d}{dt} \left(\frac{1}{2} m \dot{x}^2 + \frac{1}{2} m \dot{y}^2 + \frac{1}{2} m \dot{z}^2 \right)$

- 2.1. $\mathcal{L}(\mathcal{F})$ is a linear space over $\mathbb{R}$, and $\mathcal{L}(\mathcal{F})$ is a linear space over $\mathbb{R}$.
- 2.2. $\mathcal{L}(\mathcal{F})$ is a linear space over $\mathbb{R}$, and $\mathcal{L}(\mathcal{F})$ is a linear space over $\mathbb{R}$.
- 2.3. $\mathcal{L}(\mathcal{F})$ is a linear space over $\mathbb{R}$, and $\mathcal{L}(\mathcal{F})$ is a linear space over $\mathbb{R}$.
- 2.4. $\mathcal{L}(\mathcal{F})$ is a linear space over $\mathbb{R}$, and $\mathcal{L}(\mathcal{F})$ is a linear space over $\mathbb{R}$.
- 2.5. $\mathcal{L}(\mathcal{F})$ is a linear space over $\mathbb{R}$, and $\mathcal{L}(\mathcal{F})$ is a linear space over $\mathbb{R}$.

