

the \mathbb{R}^n is the n -dimensional volume of the region R bounded by ∂R .

Let $\mathbf{r} = (x, y, z)$ be the position vector of a point in \mathbb{R}^3 . Then the volume of the region R is given by

$$V = \int_R dV = \int_R \mathbf{r} \cdot \nabla dV = \int_{\partial R} \mathbf{r} \cdot \mathbf{n} dA, \quad (1)$$

where \mathbf{n} is the unit normal to the surface ∂R pointing outwards.

Let $\mathbf{r} = (x, y, z)$ be the position vector of a point in \mathbb{R}^3 . Then the volume of the region R is given by

$$V = \int_R dV = \int_R \mathbf{r} \cdot \nabla dV = \int_{\partial R} \mathbf{r} \cdot \mathbf{n} dA, \quad (2)$$

where \mathbf{n} is the unit normal to the surface ∂R pointing outwards.

Let $\mathbf{r} = (x, y, z)$ be the position vector of a point in \mathbb{R}^3 . Then the volume of the region R is given by

$$V = \int_R dV = \int_R \mathbf{r} \cdot \nabla dV = \int_{\partial R} \mathbf{r} \cdot \mathbf{n} dA, \quad (3)$$

where \mathbf{n} is the unit normal to the surface ∂R pointing outwards.

Let $\mathbf{r} = (x, y, z)$ be the position vector of a point in \mathbb{R}^3 . Then the volume of the region R is given by

$$V = \int_R dV = \int_R \mathbf{r} \cdot \nabla dV = \int_{\partial R} \mathbf{r} \cdot \mathbf{n} dA, \quad (4)$$

where \mathbf{n} is the unit normal to the surface ∂R pointing outwards.

Let $\mathbf{r} = (x, y, z)$ be the position vector of a point in \mathbb{R}^3 . Then the volume of the region R is given by

$$V = \int_R dV = \int_R \mathbf{r} \cdot \nabla dV = \int_{\partial R} \mathbf{r} \cdot \mathbf{n} dA, \quad (5)$$

where \mathbf{n} is the unit normal to the surface ∂R pointing outwards.

Let $\mathbf{r} = (x, y, z)$ be the position vector of a point in \mathbb{R}^3 . Then the volume of the region R is given by

$$V = \int_R dV = \int_R \mathbf{r} \cdot \nabla dV = \int_{\partial R} \mathbf{r} \cdot \mathbf{n} dA, \quad (6)$$

where \mathbf{n} is the unit normal to the surface ∂R pointing outwards.