Eiswaffel Volumen in kartesischen Koordinaten:

$$Vol = \int_{-1}^{1} \int_{-\sqrt{1-x^2}}^{\sqrt{1-x^2}} \int_{\sqrt{x^2+y^2}}^{\sqrt{2-x^2-y^2}} 1 \, dz \, dy \, dx$$

$$= \int_{-1}^{1} \int_{-\sqrt{1-x^2}}^{\sqrt{1-x^2}} \left(\sqrt{2-x^2-y^2} - \sqrt{x^2+y^2} \right) dy \, dx$$

$$= \int_{0}^{2\pi} \int_{0}^{1} \left(\sqrt{2-r^2} - r \right) \underline{\underline{r}} \, dr \, d\theta$$

↑ Übergang zu Polarkoord.

$$= \dots$$

$$= \frac{4\sqrt{2}-4}{3} \cdot \pi \approx 1.735$$