

1. Let a, b, c be positive numbers, and E be the ellipsoid described by

$$\frac{x^2}{a^2} + \frac{y^2}{b^2} + \frac{z^2}{c^2} \leq 1.$$

Show that the area of E is equal to $\frac{4}{3}\pi abc$.

2. Compute $\int \frac{1}{x(x^7+1)} dx$. *Hint: There is a pretty easy and painless way to do it.*