

Quiz 8

Compute $\int 3t^2\sqrt{t^3 + 2} dt$

Let $u = t^3 + 2$. Then $du = 3t^2 dt$, and the antiderivative becomes $\int \sqrt{u} du = \int u^{1/2} du = u^{3/2} / (3/2) + C = \frac{2}{3} u^{3/2} +$

$$C = \frac{2}{3} (t^3 + 2)^{3/2} + C$$