

Calculus — Worksheet #76

1. $\int 14 \sin^4 3x \cos 3x \, dx$

2. $\int \frac{(1 + \sqrt{x})^{1/2}}{\sqrt{x}} \, dx$

3. $\int \frac{x}{1+x^4} \, dx$ (hint: think \tan^{-1})

4. $\int t^{1/3}(1 + t^{4/3})^{-7} \, dt$

5. $\int \frac{\ln x}{x} \, dx$

6. $\lim_{n \rightarrow \infty} \sqrt{\frac{2n}{n+1}} =$