

Basic U-Substitution Integrals

Directions: Use u-substitution to integrate.

1. $\int \cos 5x \, dx$

2. $\int \sec^2(3x) \, dx$

3. $\int \sin\left(\frac{1}{2}x\right) \, dx$

4. $\int \sec \frac{x}{3} \tan \frac{x}{3} \, dx$

5. $\int \csc^2(10x) \, dx$

6. $\int -\csc\left(\frac{x}{5}\right) \cot\left(\frac{x}{5}\right) \, dx$

7. $\int \frac{3}{x-6} \, dx$

8. $\int \frac{2}{3x-1} \, dx$

9. $\int \cos x e^{\sin x} \, dx$

10. $\int \sqrt{4x-2} \, dx$

11. $\int (x-8)^{10} \, dx$

12. $\int (3x-4)^5 \, dx$