

Integration by Substitution

Problem Set 1 – no calculator

Compute each indefinite integral using either a guess-and-check method, or by substitution.

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

2. $\int \cos(2x) dx$

3. $\int e^{x/2} dx$

4. $\int \sqrt{2x+3} dx$

5. $\int 3e^{1-2x} dx$

6. $\int \sin(4x) dx$

7. $\int \sqrt{5-3x} dx$

8. $\int \tan x dx$

9. $\int x\sqrt{x^2+9} dx$

10. $\int \frac{x^2-2}{x^3-6x} dx$