

Worksheet on Integration: Substitution, IBP, and Trigonometric Integrals

1. $\int \frac{6x+1}{3x+2}$

2. $\int x \sec x \tan x dx$

3. $\int \frac{\ln(\ln x)}{x} dx$

4. $\int \sec^3 x \tan^3 x dx$

5. $\int \sin^2 \theta \cos^5 \theta d\theta$

6. $\int \frac{x^2}{(4-x^2)^{3/2}} dx$

7. $\int \frac{1}{x^2 \sqrt{1+x^2}} dx$