Integation practice I

**Here are some integrals and antiderivatives to practice with,
involving powers of sin and cos, substitution, and integration by parts.**

■ **1 Compute the antiderivative.**

$$\int \text{Sin}[x]^3 \, dx$$

■ **2 Compute the antiderivative.**

$$\int \text{Sin}[x]^3 \, \text{Cos}[x] \, dx$$

■ **3 Compute the antiderivative.**

$$\int x \, \text{Sin}[x] \, dx$$

■ **4 Compute the antiderivative.**

$$\int x^2 \, e^x \, dx$$

■ **5 Compute the antiderivative.**

$$\int \text{Sec}[x]^2 \, dx$$

■ **6 Compute the antiderivative.**

$$\int \text{Sin}[2\,x]^2\,dx$$

■ **7 Compute the antiderivative.**

$$\int \text{Tan}[3\,x]\,dx$$

■ **8 Compute the antiderivative.**

$$\int \text{Sin}[\theta]^3\,\text{Cos}[\theta]^2\,d\theta$$

■ **9 Compute the antiderivative.**

$$\int \frac{\text{Sin}[x]^3}{\sqrt{\text{Cos}[x]}}\,dx$$

■ **10 Compute the antiderivative.**

$$\int \text{Tan}[x]^3\,dx$$

■ **11 Compute the antiderivative.**

$$\int x^2\,\sqrt{2\,x^3-4}\,dx$$

■ **12 Compute the antiderivative.**

$$\int \frac{3x}{\sqrt{1-x^2}}\,dx$$

■ **13 Compute the antiderivative.**

$$\int \text{Sin}[2x]^3\,\text{Cos}[2x]\,dx$$

■ **14 Compute the antiderivative.**

$$\int x\,e^{2x}\,dx$$

■ **15 Compute the antiderivative.**

$$\int x^2\,\text{Sin}[x]\,dx$$

■ **16 Compute the antiderivative.**

$$\int x^3\,\text{Log}[x]\,dx$$

■ **17 Compute the antiderivative.**

$$\int \text{Log}[x]\,dx$$

■ **18 Compute the antiderivative.**

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∫Log[x]^2 dx
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