

Find the **anti-derivative** for the following

$$\int (2x + 3)^2 dx$$

Find the **anti-derivative** for the following

$$\int 3(4x - 2)^3 dx$$

Find the **anti-derivative** for the following

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

Find the **anti-derivative** for the following

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

Find the **anti-derivative** for the following

$$\int \sin 3x \, dx$$

Find the **anti-derivative** for the following

$$\int \cos 5x \sin^2 5x \, dx$$