

$$\int ax^n dx = a \int x^n dx$$

Tips:

1. The constant of a function can be moved outside the integral

Constant Multiple:

$$\int_a^b kf(x)dx = k \int_a^b f(x)dx \quad \text{Any number } k$$

$$\int_a^b -f(x)dx = - \int_a^b f(x)dx \quad k = -1$$

2. Change roots/fractions to index power before integrating $3/x^3 = 3x^{-3}$
3. Simplify fractions by dividing numerator by denominator $(x^3 + x^2)/x = x^2 + x$
4. When there are brackets, you can expand!
 $x(2x - 9) = 2x^2 - 9$

7.3 WORKED EXAMPLE

$$\int \frac{7}{9}(x+1)^5 dx$$

7.4 WORKED EXAMPLE

$$\int \frac{11}{12} \sqrt{2x+3} dx$$