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

Tips:

1. The constant of a function can be moved outside the integral
   Constant Multiple:
   $\int_a^b kf(x)dx = k\int_a^b f(x)dx$ 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! $x(2x - 9) = 2x^2 - 9$

7.1 WORKED EXAMPLE

$\int 4x^2 dx$

7.2 WORKED EXAMPLE

$\int \frac{5}{2}(x+2)^3 dx$