Teoremas básicos de integración

1. $\int dx = x + c$
2. $\int k\ dx = kx + c$
3. $\int u^n\ du = \frac{u^{n+1}}{n+1} + c$, donde $n \neq -1$

Cuando $u = x$, entonces:

$$\int x^n dx = \frac{x^{n+1}}{n+1} + c$$

4. $\int \frac{du}{u} = \int u^{-1}\, du = \ln u + c$, donde $n = -1$

Ejemplo

- $\int 8dx$
- Se aplica la formula 2. . $\int k\ dx = kx + c$

$$\int 8dx = 5x + c$$

Resuelve las siguientes integrales mediante los teoremas básicos de integración.

- $\int 6dx = \int \quad dx = \qquad + c$
- $\int 4dx = \int \quad dx = \qquad + c$
- $\int 5dx = \int \quad dx = \qquad + c$

LIVEWORKSHEETS

- $\int x^5 dx = \int x^5 = \frac{5+1}{5+1} + c = \int \text{—} + c =$

  $\int x^5 = \text{——}$
- $\int 2x^4 dx = \int 2x^4 dx = 2\int \quad dx = \int 2(\frac{4+1}{\text{——}}) +$

  $c = \int 2 \quad dx = \frac{2\,x}{\text{——}} + \mathrm{c}$
- $\int \frac{6}{x^4} dx = \int \frac{6}{x^4} dx = - \text{——} + c$
- $\int 2\sqrt[3]{xdx} = \int 2\sqrt[3]{xdx} = -\sqrt[3]{\quad} + c$
- $\int \frac{dx}{\sqrt[4]{x^3}} dx = \int \frac{dx}{\sqrt[4]{x^3}} = 4\ \sqrt{\quad} + c$
- $\int (5x^3 + 3x^2 - 2x + 4)dx = \frac{5}{\text{——}} - \quad -$

  $2 \quad + \quad + c$
- $\int (x+2)^5 dx = \frac{x+}{\text{——}} + c$
- $\int 3dx = \quad + c$
- $\int 10dx = \quad + c$

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