

Integration Homework

Literacy

Integrate, Indefinite, Definite, integral, integrand, Limits, bound, area

Research

Research some of the practical uses of integration. Do not just list what Wikipedia has as uses of integration

Memory

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

Skills

1. Evaluate the following

a) $\int x(3x + 2)dx$ b) $\int x^4 + 3x^2 - 3dx$ c) $\int \frac{1}{2}x^2 + 3x + 4 dx$

2. Evaluate the following

a) $\int_{-1}^2 x^2 dx$ b) $\int_{-2}^{-1} (1 + 2x^3) dx$ c) $\int_1^2 (x - 1)(2x + 1) dx$

Stretch

Evaluate the following

a) $\int 7x^6 - \frac{3}{x^3}$

b) $\int 3 - 2\sqrt{x} + 3x^{-2}$

c) $\int_{-4}^1 4x - \frac{2}{x^3} + 6$