A2 Mathematics: Revision Questions 2

Dr Oliver

March 1, 2018

Dr Oliver Mathematics

Integration

$$\int \sin x \, dx =$$

$$\int \cos x \, dx =$$

$$\int \tan x \, dx =$$

$$\int \operatorname{cosec} x \, dx =$$

$$\int \sec x \, dx =$$

$$\int \cot x \, dx =$$

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Squares and Cubes

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3. What is a wire?
A rigid thin length of metal.

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$$\tan(A + B) \equiv \frac{\tan A + \tan B}{1 - \tan A \tan B}$$

$$\int f'(x)e^{f(x)}\,dx$$

A Calculus Miscellany

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$$\begin{aligned}\int \ln x \, dx &= \int (1 \times \ln x) \, dx \\ &= x \ln x - \int 1 \, dx \\ &= x \ln x - x + c.\end{aligned}$$

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$$c = \frac{2\pi}{3} + \pi = \underline{\underline{\frac{5\pi}{3}}}$$