



CHEMISTRY ONLINE
— **TUITION** —

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PURE MATH

ALGEBRA AND FUNCTION

Level & Board	EDEXCEL (A-LEVEL)
TOPIC:	INTEGRATION
PAPER TYPE:	QUESTION PAPER - 1
TOTAL QUESTIONS	8
TOTAL MARKS	26

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INTEGRATION – 1

1. Use differentials to find $\frac{dy}{dx}$ when $\frac{y}{x} - \ln x = \ln c$

[4]

2. Use differentials to approximate the values of $\sqrt[4]{17}$

[3]

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3. Find the approximate increase in the area of a circular disc if its diameter is increased from 44 cm to 44.4 cm.

[3]

4. Evaluate the indefinite integral

$$\int(3x^2 - 2x + 1)dx$$

[4]

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5. Evaluate the indefinite integral

$$\int (2x + 3)^{1/2} dx$$

[2]

6. Find the approximate increase in the volume of a cube if the length of each edge changes from 5 to 5.02.

[3]

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7. Evaluate $\int \frac{1}{(2x+3)^4} dx$

[2]

8. Prove that $\int \frac{f'(x)}{f(x)} dx = \ln f(x) + c$

[5]



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