H · Integration

AQA · A-Level · Mathematics · Vocabulary in context

Word	Example
integration /ˌɪntɪˈgreɪʃn/	**Integration** is the reverse of differentiation.
constant of integration /ˈkɒnstənt ɒv ˌɪntɪˈgreɪʃn/	The **constant of integration** c is there because every curve $y = x^2 + c$ has the same gradient 2x. $y = x^2 + c$ 2x c
antiderivative /ˌæntɪdɪˈrɪvətɪv/	Check an **antiderivative** by differentiating it.
indefinite integral /ɪnˈdefɪnət ˈɪntɪgrəl/	An **indefinite integral** always includes a constant of integration, + c. + c
Fundamental Theorem /ˌfʌndəˈmentl ˈθɪərəm/	The **Fundamental Theorem** shows that integration undoes differentiation.
definite integral /ˈdefɪnət ˈɪntɪgrəl/	A **definite integral** has limits and gives a number, such as an area.
integration by substitution /ˌɪntɪˈgreɪʃn baɪ ˌsʌbstɪˈtjuːʃn/	**Integration by substitution** replaces an inner function by a new letter u. u
integration by parts /ˌɪntɪˈgreɪʃn baɪ pɑːts/	We use **integration by parts** to integrate a product such as $x\,e^x$. $x\,e^x$
separable differential equation /ˈsepərəbl ˌdɪfəˈrenʃl ɪˈkweɪʒn/	In a **separable differential equation**, you can put all the y terms on one side. y
general solution /ˈdʒenərəl səˈluːʃn/	The **general solution** includes the constant c. c
particular solution /pəˈtɪkjʊlə səˈluːʃn/	Use the starting value to find c and get the **particular solution**. c

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