Algebra

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Word	Example
binomial /baɪˈnəʊmɪəl/	x + 3 is a **binomial** because it has two terms. x + 3
rational expression /ˈræʃənl ekˈspreʃn/	(x + 1)/(x − 2) is a **rational expression**. (x + 1)/(x − 2)
identity /aɪˈdentɪti/	2(x + 1) = 2x + 2 is an **identity**: it is true for every x. 2(x + 1) = 2x + 2 x
proof /pruːf/	A **proof** must justify every case covered by its claim.
consecutive integers	5 and 6 are **consecutive integers**. 5 6
function /ˈfʌŋkʃn/	A **function** returns a value.
domain /dəˈmeɪn/	Leave zero out of the **domain** when x is on the bottom of a fraction. x
range /reɪndʒ/	The **range** of $f(x) = x^2$ is all values greater than or equal to zero. $f(x) = x^2$
composite function /ˈkɒmpəzɪt ˈfʌŋkʃn/	A **composite function** fg(x) means f(g(x)): apply g first. fg(x) f(g(x)) g
inverse function /ɪnˈvɜːs ˈfʌŋkʃn/	The **inverse function** undoes the original function.
quadrant /ˈkwɒdrənt/	An angle of 200° lies in the third **quadrant**, where sine and cosine are both negative. 200°
parallel lines /ˈpærəlel laɪnz/	Distinct **parallel lines** keep the same direction and never meet.

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perpendicular /ˌpɜːpənˈdɪkjʊlə/	The wall is **perpendicular** to the floor.
cubic /ˈkjuːbɪk/	$x^3 + 2x$ is a **cubic** expression. $x^3 + 2x$
intercept /ˌɪntəˈsept/	The line crosses the y-axis at the **intercept**. y
turning point /ˈtɜːnɪŋ pɔɪnt/	The **turning point** is the top or bottom of the curve.
completing the square /kəmˈpliːtɪŋ ðə skweə/	**Completing the square** turns $x^2 + 6x$ into $(x + 3)^2 - 9$. $x^2 + 6x$ $(x + 3)^2 - 9$
trapezium /trəˈpiːzɪəm/	Split the area under the graph into a **trapezium** and a triangle.
differentiation /ˌdɪfəˌrenʃɪˈeɪʃn/	**Differentiation** finds how a function changes at each input.
gradient function /ˈgreɪdɪənt ˈfʌŋkʃn/	The **gradient function** gives a slope for each input value.
derivative /dɪˈrɪvətɪv/	Use the **derivative** to find the curve's slope at this point.
tangent /ˈtændʒənt/	Draw a **tangent** to the curve to find the gradient at one point.
stationary point /ˈsteɪʃənəri pɔɪnt/	The tangent is horizontal at a **stationary point**.
maxima or minima /ˈmæksɪmə ɔː ˈmɪnɪmə/	Find **maxima or minima** by checking how the gradient changes.
point of inflection /pɔɪnt ɒv ɪnˈflekʃn/	At a **point of inflection**, the curve changes from bending one way to the other.

Word	Example
quadratic equation /kwɒ'drætɪk ɪ'kweɪʒn/	$x^2 - 5x + 6 = 0$ is a **quadratic equation**. $x^2 - 5x + 6 = 0$
quadratic inequality /kwɒ'drætɪk ɪni:'kwɒlɪti/	$x^2 - 4 < 0$ is a **quadratic inequality**. $x^2 - 4 < 0$
nth term /ˌenˌti:'eɪtʃtɜ:m/	The **nth term** of 5, 8, 11, ... is 3n + 2. 5, 8, 11, ... 3n + 2
quadratic sequence /kwɒ'drætɪk 'si:kwəns/	A **quadratic sequence** has constant nonzero second differences.
second difference /'sekənd 'dɪfrəns/	A constant **second difference** means the sequence is quadratic.

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