Transformations and vectors

IGCSE Mathematics · Vocabulary in context

Word	Example
transformation /trænsfɔːˈmeɪʃn/	This **transformation** moves the graph three units up.
reflection /rɪˈflekʃn/	A **reflection** flips a shape over a mirror line.
mirror line /ˈmɪrə laɪn/	Reflect the shape in the **mirror line**.
rotation /rəʊˈteɪʃn/	A **rotation** turns a shape around a point.
centre /ˈsentə/	The **centre** of rotation is the point that stays still.
enlargement /enˈlɑːdʒmənt/	An **enlargement** makes a shape bigger or smaller.
scale factor /skeɪl ˈfæktə/	A **scale factor** of 2 doubles every length. 2
translation /trænˈsleɪʃn/	A **translation** moves every point two units to the left.
vector /ˈvektə/	A **vector** describes both size and direction.
column vector /ˈkɒlʌm ˈvektə/	A **column vector** is written with one number above the other.
scalar /ˈskeɪlə/	Mass is a **scalar** because it has no direction.
magnitude /ˈmægnɪtjuːd/	The **magnitude** of the vector 3i + 4j is 5. 3i + 4j 5
directed line segment /daɪˈrektɪd laɪn ˈsegmənt/	A vector is a **directed line segment**: it has length and direction.
position vector /pəˈzɪʃn ˈvektə/	The **position vector** of point A tells you where A is from the origin. A A

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parallel /ˈpærəlel/	**Parallel** lines have equal gradients and never meet.
collinear /ˈkɒlɪnɪə/	Three points are **collinear** if they all lie on the same straight line.
coplanar /ˌkəʊˈpleɪnə/	All three forces lie on the same flat page: they are **coplanar**.