

Mat

Term	6	
Topic	Geometry 4	Statistics 1
Detail	Perform and describe reflections, translations and rotations on a coordinate grid.	Construct and interpret a range of statistical charts and diagrams. Students will need a pencil, ruler, protractor and pair of compasses.
Mastered	Interpret, analyse and generate strategies to solve problems involving translations and reflections.	Interpret, analyse and generate strategies to solve problems involving statistical diagrams and averages.
Secure	Recall, use, select and apply the knowledge of translations and reflections. Draw and identify the lines $y = x$, $y = -x$ and perform reflections in these lines. Describe and use a 2D vector as a translation.	Recall, use, select and apply the knowledge of statistical diagrams and averages.
Developing	Describe a translation. Describe a reflection which uses one of the axes as a mirror line. Perform and describe a rotation using a given angle, direction and centre of rotation.	Use a table of frequencies to work out the angles for a pie chart, where frequency is a factor of 360° . Use the mean to find a missing number in a data set. Calculate the mode, median and mean from a frequency table.
Emerging	Perform a translation Perform a reflection using one of the axes as a mirror line.	Construct and interpret pictograms, bar charts and tables. Read values from a line graph. Understand that pie charts are used to show proportion. Draw and measure angles in a pie chart. Find the mode, median, mean and range of a set of data.

Keywords	2-D, grid, axis, axes, x-axis, y-axis, origin, quadrant, (cartesian) coordinates, point, translation, reflection, transformation, rotation, object, image, congruent, congruence, vector, centre of rotation	data, scale, axis, axes, graph, frequency, time graph, time series, line graph, pie chart, sector, angle, protractor, degrees, maximum, minimum, categorical data, discrete data, pictogram, symbol, key, frequency table, tally, bar chart, bar-line graph, vertical line chart,
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Resource Links	KM: Lines	KM: Stick on the Maths HD6: Graphs and diagrams
	KM: Moving house	NRICH: Match the Matches
	KM: Transformations: Bop It?	NRICH: Graphing Number Patterns
	KM: Dynamic Autograph files: Reflection, Rotation, Translation	NCETM: A little bit of history (Britain since 1945)
	KM: Autograph transformations	KM: Constructing pie charts
	KM: Stick on the Maths SSM7: Transformations	KM: Maths to Infinity: Averages, Charts and Tables
	NRICH: Transformation Game	NRICH: Picturing the World
		NRICH: Charting Success
		KM: Maths to Infinity: Averages KM: Maths to Infinity: Averages, Charts and Tables KM: Stick on the Maths HD4: Averages NRICH: M, M and M NRICH: The Wisdom of the Crowd

