Year 8 Maths Curriculum & Video Lessons to Support Learning from Home

	Topic	*Video lessons to support learning from home:*
Autumn 1	<u>*Proportional Reasoning*</u> ***Ratio and scales*** 1. Ratio notation 2. Finding the missing part of a ratio 3. Sharing in a given ratio 4. Simplifying a ratio 5. Comparing ratios and fractions 6. Understanding pi as a ratio 7. Understanding gradients as a ratio ***Multiplicative change*** 1. Direct proportion and conversion graphs 2. Converting between currencies 3. Ratio between similar shapes 4. Scale factor 5. Scale diagrams 6. Scale factors and maps ***Multiplying and dividing fractions*** 1. Multiplying fractions (by an integer and unit fractions) 2. Multiplying any fractions 3. Divide an integer by a fraction 4. Dividing any fractions 5. Multiply and divide improper and mixed fractions 6. Algebraic fractions (Higher)	***Ratio and scales*** https://classroom.thenational.academy/lessons/in-the-same-ratio-chgked https://classroom.thenational.academy/lessons/dividing-into-a-ratio-i-65j6cc https://classroom.thenational.academy/lessons/dividing-into-a-ratio-ii-cdhpcd ***Multiplicative change*** https://classroom.thenational.academy/lessons/understanding-rate-cgv34r https://classroom.thenational.academy/lessons/conversion-rates-ccwkjc ***Multiplying and dividing fractions*** https://classroom.thenational.academy/lessons/multiplying-unit-fractions-with-integers-crtpcd https://classroom.thenational.academy/lessons/multiplying-non-unit-fractions-with-integers-70rker https://classroom.thenational.academy/lessons/dividing-a-fraction-by-an-integer-6mrpac https://classroom.thenational.academy/lessons/modelling-fractions-by-division-part-1-70vp8r https://classroom.thenational.academy/lessons/modelling-fractions-by-division-part-2-61gk2e https://classroom.thenational.academy/lessons/dividing-fractions-in-mixed-contexts-6nhp4e

Autumn 2	*<u>Representations</u>* ***Working in the Cartesian plane*** 1. Work with coordinates in al four quadrants 2. Identify and draw lines that are parallel to the axes and the line y=x 3. Recognise lines of the form y=kx and link to direct proportion problems 4. Explore gradient 5. Explore graphs with negative gradients 6. Link graphs to linear sequences 7. Plot graphs in the form y=mx+c 8. Explore non-linear graphs and midpoints (Higher) ***Collecting and representing data*** 1. Draw and interpret scatter graphs 2. Understand and describe linear correlation 3. Draw and use line of best fit 4. Identify non-linear relationship 5. Identify different types of data 6. Read and interpret ungrouped frequency tables 7. Represent grouped discrete data 8. Represent continuous data 9. Construct and interpret two-way tables ***Tables and probability*** 1. Construct sample space for one or more events 2. Find probabilities from a sample space and two way tables 3. Find probabilities from venn diagrams 4. Use the product rule for finding the total number of possible outcomes	***Working in the Cartesian plane*** https://classroom.thenational.academy/lessons/the-2-d-coordinate-axis-6hgp6d https://classroom.thenational.academy/lessons/exploring-horizontal-and-vertical-lines-70tpae https://classroom.thenational.academy/lessons/equations-of-lines-64r64c https://classroom.thenational.academy/lessons/finding-midpoints-71k38d ***Collecting and representing data*** https://classroom.thenational.academy/lessons/plot-a-scatter-graph-and-describe-correlation-6nh6ce?from_query=scatter+graphs https://classroom.thenational.academy/lessons/interpreting-frequency-tables-ccu3gd?from_query=frequency+table https://classroom.thenational.academy/lessons/design-and-interpret-two-way-tables-crwp8r?from_query=two+way ***Tables and probability*** https://classroom.thenational.academy/lessons/combined-events-and-sample-spaces-part-1-69gp6d?from_query=sample+space https://classroom.thenational.academy/lessons/combined-events-and-sample-spaces-part-2-crwkee?from_query=sample+space https://classroom.thenational.academy/lessons/venn-diagrams-6ctked?from_query=venn+dia https://classroom.thenational.academy/lessons/list-outcomes-in-a-sample-space-diagram-two-way-table-and-calculate-probabilities-64u68r?from_query=listing+outcomes