

Subject	Year 8 Thresholds Concepts – Autumn Term	How to support students learning
Mathematics	<p>Negative numbers - Recap from Year 7</p> <ul style="list-style-type: none"> • Ordering negative numbers - M527 • Adding and subtracting negative numbers - M106 • Multiplying and dividing negative numbers - M288 <p>Decimals - Recap from Year 7</p> <ul style="list-style-type: none"> • Rounding integers - M111 • Rounding decimals - M431 • Adding decimals - M429 • Subtracting decimals - M152 • Using a written method to multiply decimals - M803 • Using a written method to divide by decimals - M491 <p>Multiples, Factors and Primes - Recap from Year 7</p> <ul style="list-style-type: none"> • Finding the lowest common multiple - M227 • Finding factors and using divisibility tests - M823 • Finding the highest common factor - M698 • Finding prime numbers - M322 • Prime factor decomposition - M108 <p>Algebra</p> <ul style="list-style-type: none"> • Simplifying expressions by collecting like term - M795, M531, M949 • Multiplying and dividing terms (look at the index rules with positive and negative indices) - M120 • Expanding single brackets - M237, M792 • Factorising into single brackets - M100 • Substitution - M327, M979 • Solving equations of the form $(x+a)/b=c$ - M401 • Solving linear equations with brackets - M902 • Solving equations with unknowns on both sides - M554 • Solving equations with the unknown in the denominator - M387 	<ul style="list-style-type: none"> • Encourage your child to practise their times tables up to 15 at home. • Encourage your child to set their work out using the correct columns for place value. • Encourage your child to estimate answers by rounding e.g. shopping costs by rounding to the nearest £. • Encourage your child to look at where they may use negative numbers in real life. • Homework will be set on Sparx – teachers will provide your child with a login and password. Use the Sparx codes provided next to the concepts to support them when required.

- Constructing and solving equations - M957

Sequences

- Term-to term rules for numerical sequences - M381
- Term-to-term rules for sequences of patterns - M241
- Substituting into position to term rules - M166
- Position-to-term rules for arithmetic sequences - M991
- Position-to-term rules for sequences of patterns - M866

Area

- Finding the area of parallelograms - M291
- Finding the area of trapeziums - M705
- Identifying parts of circles - M595
- Finding the circumference of circles - M169
- Finding the area of circles - M231
- Converting units of area - M728

Fractions - Recap from Year 7

- Converting between fractions, decimals and percentages - M264
- Fractions of amounts without a calculator - M695
- Fractions of amounts with a calculator - M684

Percentages

- Finding percentages of amounts without a calculator - M437
- Finding percentages of amounts with a calculator - M905
- Percentage change without a calculator - M476
- Percentage change with a calculator - M533
- Value for money - M681

Ratio

- Writing and simplifying ratios - M885
- Writing ratios in the form 1:n - M543

	<ul style="list-style-type: none">• Converting between ratios, fractions and percentages - M267• Using equivalent ratios to find unknown amounts - M801• Sharing amounts into a given ratio - M525• Drawing and interpreting scale diagrams - M112 <p>Rounding & Estimating</p> <ul style="list-style-type: none">• Rounding integers using significant figures - M994• Rounding decimals using significant figures - M131• Estimating calculations - M878 <p>C-ordinates</p> <ul style="list-style-type: none">• Calculating midpoints - M622• Mixed problems: Coordinates and midpoints - M311 <p>Standard Form</p> <ul style="list-style-type: none">• Using standard form with positive indices - M719• Using standard form with negative indices - M678	
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