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| Subject | Year 8 Thresholds Concepts – Autumn Term | How to support students learning |
| Mathematics | **Negative numbers - Recap from Year 7*** Ordering negative numbers - M527
* Adding and subtracting negative numbers - M106
* Multiplying and dividing negative numbers - M288

**Decimals - Recap from Year 7*** 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

**Multiples, Factors and Primes - Recap from Year 7*** 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

**Algebra*** 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
* 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
* 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

**Rounding & Estimating*** Rounding integers using significant figures - M994
* Rounding decimals using significant figures - M131
* Estimating calculations - M878

**C-ordinates*** Calculating midpoints - M622
* Mixed problems: Coordinates and midpoints - M311

**Standard Form*** Using standard form with positive indices - M719
* Using standard form with negative indices - M678
 | * 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.
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