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| **Core Knowledge Map** | | | | | |
| Subject: Maths | Year: 8 | | | Term: 1 | |
| What are we learning? | | | | | |
| |  |  |  |  |  | | --- | --- | --- | --- | --- | | **Unit 1: Ratio and scale** | **Sparx IL Code** | Sad face outline with solid fill | Nervous face outline with solid fill | Smiling face outline with solid fill | | Use ratio notation | M885 |  |  |  | | Solve problems in the form 1:n or m:n | M543 |  |  |  | | Divide in a given ratio | M525 |  |  |  | | Express ratio in their simplest form | M885 |  |  |  | | Express ratios in the form 1:n (H) | M543 |  |  |  | | Compare ratios and related fractions | M267 |  |  |  | | Use π as a ratio in circumference calculations | M169 |  |  |  | | Calculate the gradient of a straight line (H) | M544 |  |  |  | | | | | | |
| How will I be assessed | | | | | |
| Retrieval Tasks. Exit Tickets. Topic Test at the end of the unit. | | | | | |
| Big questions: | | | | | |
| Can you…?   * give the ratio of boys to girls, in its simplest form, for a class that contains 18 boys and 12 girls. * explain the purpose of ratios? * explain why order is important in ratios? * explain how ratios can be used, to compare more than two items? * choose the bigger/better etc. one given two ratios in the form 1:n? * explain how a ratio is affected or not affected by applying the four operations to each part? * use bar models to represent ratios and manipulate them? * simplify ratios, and explain what is meant by common factors? * explain the similarities and differences between ratios and fractions? * find the perimeter of a circle given its radius or diameter? | | | | | |
| How does this build on previous learning? | | How will this link to my future learning? | | | |
| * Multiplication and division * Use of bar models. * link to the similarity (but also differences) of simplifying fractions * finding common factors | | * ratios will be studied again in Year 9 * Trigonometric ratios in Year 9 and GCSE * ratio features notably in the GCSE course. | | | |
| Core knowledge: | | Key vocabulary: | | | |
| * a **ratio** compares how much of one thing there are compared to another. * A **ratio** is expressed in the form a : b where a and b are integers. You can have three or more part ratios eg a : b : c * The **gradient** of a line tells us how steep it is. * The **circumference** of a circle is the perimeter length. | | | Ratio  Equal parts  For every  Proportion  Simplify  Share  Common factors  Equivalent | | Perimeter  Circumference  Pi (π)  Diameter  Right-angled  Gradient  Slope  Steep |
| Need more help? Use the Sparx Independent Learning Codes above | | | | | |