



Spring Learning Journey for Maths

Year 10F Unit 5 Ratio and Proportion

How does this unit link to prior learning?

- Highest Common Factor and Lowest Common Multiple
- Unit conversions
- Square and cube numbers
- Ratio

Prior Knowledge Check

1. Find the HCF of 20 and 35
2. How many mm is 22cm?
3. What is 2^3 ?
4. How many grams in 4kg?
5. Simplify the ratio 35:49

What will you be learning about?

- Be able to use ratios and proportion to solve a wide range of problems.

We will develop our learning each week by focusing on:

1. Writing ratios <ul style="list-style-type: none"> • Use ratio notation. • Write a ratio in its simplest form. 	RAG 	2. Using ratios <ul style="list-style-type: none"> • Solve simple problems using ratios. 	RAG
3. Ratios and measures 1 <ul style="list-style-type: none"> • Use ratios to convert between units. 		4. Ratios and measures 2 <ul style="list-style-type: none"> • Write and use ratios for shapes and their enlargements. 	
5. Using ratios 2 <ul style="list-style-type: none"> • Divide a quantity into 2 parts in a given ratio. • Divide a quantity into 3 parts in a given ratio. • Solve word problems using ratios. 		6. Comparing using ratios <ul style="list-style-type: none"> • Use ratios involving decimals. • Compare ratios. • Solve ratio and proportion problems. 	
7. Using proportion <ul style="list-style-type: none"> • Use the unitary method to solve proportion problems. 		8. Best buys <ul style="list-style-type: none"> • Solve proportion problems in words. • Work out which product is better value for money. 	

<p>9. Proportion and graphs</p> <ul style="list-style-type: none"> Recognise and use direct proportion on a graph. Understand the link between the unit ratio and the gradient. 		<p>10. Proportion problems</p> <ul style="list-style-type: none"> Recognise different types of proportion. Solve word problems involving direct and inverse proportion. 				
<p>11. Revision Lesson</p> <ul style="list-style-type: none"> Select topics you feel the class need to revise. Classroom based or Mathswatch. 		<p>12. Assessment Lesson (non-calculator)</p> <ul style="list-style-type: none"> Do 10-minute top up and go through answers together, students self-assess. Open book assessment done in silence. 				
<p>13. Feedback Lesson</p> <ul style="list-style-type: none"> Student to highlight their traffic light sheet. Teacher to go through test and students to self-assess in green. Students to complete the NOW section of the WOW-HOW-NOW sheet. 						
Key Vocabulary						
Ratio	Proportion	Share	Function	Fraction	graphical	Compare

How will this help you in the future?
<p>Ratio and proportion are important in adult life because they help people compare quantities and keep relationships balanced. They are used when scaling amounts up or down, mixing ingredients, and understanding how one quantity relates to another. For example, ratios help when following recipes, mixing paint or chemicals, reading maps, and comparing prices to find the best value.</p> <p>Many jobs rely on ratio and proportion. Chefs, bakers, and food manufacturers use them to keep flavors consistent. Nurses, pharmacists, and scientists use them to mix correct dosages and solutions. Builders, architects, and engineers use ratios to scale drawings and measurements accurately. Business owners and designers use proportions for pricing, budgeting, and creating visually balanced designs. In everyday adult life, understanding ratio and proportion helps with problem-solving, planning, and making fair and accurate decisions.</p>