Summer Learning Journey for Maths
Year 7F Unit 7 Ratio and Proportion

How does this unit link to prior learning?

- **Dividing amounts**
  Link to lesson 1: Direct proportion
- **Find highest common factors**
  Link to lesson 2: Writing ratios
- **Divide and multiply integers**
  Link to lesson 3: Using ratio
- **Measure using a ruler**
  Link to lesson 4: Scales and measures
- **Understand what a fraction is**
  Link to lesson 5: Proportions and fractions
- **Work out percentages**
  Link to lesson 6: Proportions and percentages

Prior Knowledge Check

1. Work out: a) 250g ÷ 5 =

   b) £1.20 ÷ 6 =

2. Find the highest common factor of 15 and 20:

3. Work out: a) 40 ÷ 5 x 3 =

   b) 20 ÷ 4 x 6 =

4. Measure the length of this line to the nearest mm. _____

5. Jennie has 10 sweets. Three of these sweets are strawberry flavoured. What fraction of the sweets are NOT strawberry flavoured?

6. Calculate the following percentages: a) 10% of 300

   b) 50% of 600

What will you be learning about?

Simplify and share with ratio.
Understand the connection between fractions, percentages and ratio.
Understand and calculate with amounts in proportion.

We will develop our learning each week by focusing on:

1. Direct Proportion	**RAG**	**2. Writing ratios**	**RAG**
• Use direct proportion in simple contexts. • Solve simple problems involving direct proportion. • Use the unitary method to solve simple word problems involving direct proportion.		• Use ratio notation. • Reduce a ratio to its simplest form. • Reduce a three-part ratio to its simplest form by cancelling.	

3. Using ratios • Divide a quantity into two parts in a ratio given in words. • Divide a quantity into two parts in a given ratio. • Solve word problems involving ratio.		**4. Consolidation lesson** • Consolidation on all work covered so far on the topic. • Long periods of deliberate practice. • Should contain exam questions.	
5. Scales and measures • Use ratios and measures.		**6. Proportions and fractions** • Use fractions to describe and compare proportions. • Understand and use the relationship between ratio and proportion.	
7. Proportions and percentages • Use percentages to describe proportions. • Use percentages to compare simple proportions. • Understand and use the relationship between ratio and proportion.		**8. Consolidation/Revision lesson** • Consolidation on all work covered so far on the topic. • Long periods of deliberate practice. • Should contain exam questions	
9. Assessment Lesson (non-calculator) • Do 10-minute top up and go through answers together, students self-assess. • Open book assessment done in silence.		**10. Feedback Lesson** • 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

Proportion	Ratio	Simplify	Quantity	Fractions	Percentages	Scale factor

How will this help you in the future?

KS4

Percentages
- Ratio and proportion help pupils understand percentage increase, decrease, reverse percentages and percentage change.

Fractions, decimals and percentages (FDP)
- Converting between these relies on understanding parts of a whole.

Algebra
- Proportion leads directly to forming and solving equations
- Direct and inverse proportion

Scale factors and similarity
- Used in similar shapes, area and volume scale factors, enlargement and maps

Probability
- Probabilities are proportions written as fractions, decimals or percentages.

Compound measures
- Density, pressure and speed all rely on ratio and proportion.

Beyond LHS

Money and budgeting
- Working out discounts and sale prices
- Comparing value for money (e.g. price per item)
- Splitting bills fairly

Cooking and recipes
- Adjusting ingredients for different numbers of people

Work and careers
- Trades: mixing materials (cement, paint, chemicals)
- Health: medication doses based on body weight
- Business: profit, loss, commission and tax
- Science and engineering: formulas and rates

Sport and fitness
- Win percentages
- Performance statistics
- Ratios in training plans

Travel and maps
- Reading scale drawings
- Working out real distances from maps
- Speed and time calculations

Everyday decisions
- Comparing offers (e.g. “3 for £5” vs “£1.80 each”)
- Understanding percentages in news, polls and adverts