### Ratio & Proportion 1

Key Knowledge/Prior Learning KS2/3 and Retrieval and Suggested Starters Ratio Recap:

- Simplify ratios.
- Divide a given quantity into two parts in a given part : part or part : whole ratio
- Solve ratio problems when you are given one of the quantities or the difference between two quantities.
- Apply ratio to real contexts and problems (such as those involving conversion, comparison, scaling, mixing, concentrations)
- Substitution

## • Rearranging formulae.

### **Retrieval and Suggested Starters**

- Practising the fluency of the above skills.
- Interleaving & problem-solving questions involving the above topics.

### KS4 National Curriculum – what students will be practicing

- Solve problems involving direct and inverse proportion, including graphical and algebraic representation
- Solve best buy problems.
- Understand and solve problems involving recipes.

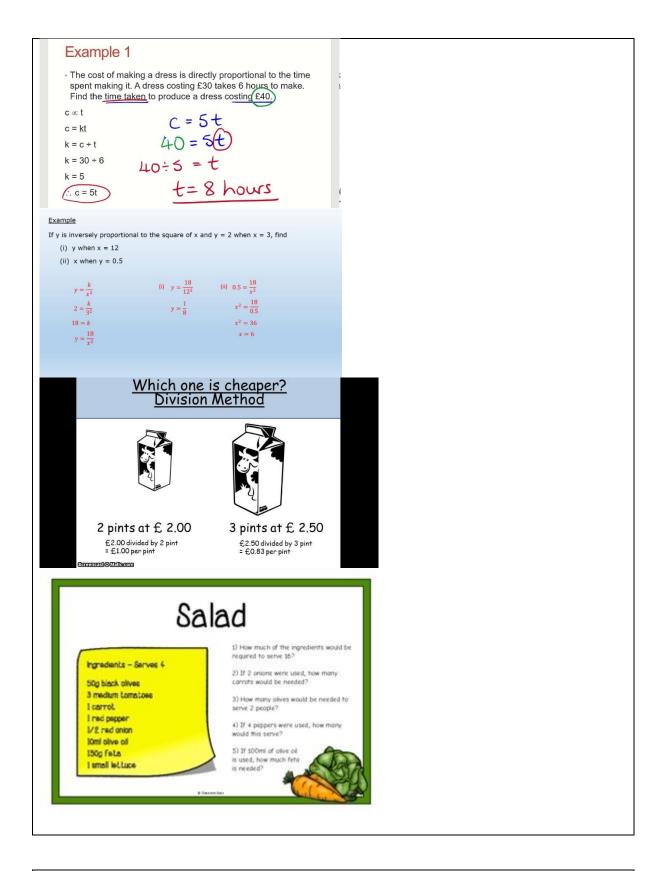
#### Specific Ambitious Knowledge

- Understand that *X* is inversely proportional to *Y* is equivalent to *X* is proportional to *1Y*
- Interpret equations that describe direct and inverse proportion
- Interleaving topics & problem-solving scenarios.

#### Key Vocabulary/Literacy Opportunities

- Inverse
- Direct
- Proportion
- Indirect

Key Formulae/Knowledge:



#### **Cross Curricular Links**

• Links to other areas of the maths curriculum such as algebra, percentages, etc.

# Student' Thinking

- What happens when one increases if two variables are inversely proportional?
- Can the value of k change?
- Is there more than one method to determine a best buy?

# Projects/Enrichment/Investigations

• Shared documents/Maths/Projects/Problem-solving card sorts.