Year 8 Maths Learning Journey

Spring half term 2 – Ratio

Content – Including 'Big Questions'

Core knowledge; Sharing an amount	Complete
Fraction of a Quantity – What is the whole, what is the part?	
Sharing a quantity in a given ratio - What is the whole, what is the part?	
Application of sharing a quantity in a given ration (angles) - What is the whole, what is the part?	
Finding the part and the whole - What is the whole, what is the part?	
Core knowledge; Exploring ratios	**Complete**
Ratio value - What is the whole, what is the part?	
Exploring equivalent ratios – What's the relationship between the parts?	
Simplifying ratios – Whats the relationship between the parts?	
Solving problems including FDPR – What is the whole, what is the part?	
Finding a:c given a:b and b:c – Can we compare parts?	
Core knowledge; Ratio as a proportion	**Complete**
Ratio as a proportional relationship (a:b means 'for every') - Are the parts related?	
The Golden Ratio – what is the golden ratio?	
Ratio as a proportional relationship : Scale - What are scaler and functional relationships?	
Ratio as a proportional relationship : Recipes - What are scaler and functional relationships?	
Ratio as a proportional relationship : exchange rates – What are scaler and functional relationships?	

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Learning Checkpoints

Learning Check Title	Score	Dirt
Sharing an amount		
Exploring ratios		
Ratio as a proportion		

<u>Key Vocabulary</u>

Decimal: A number where the tenths, hundredths, thousandths etc. are represented as digits following a decimal point

Double numberline: A double number line shows two separate numberlines each of the quantities on its own number line, with corresponding pairs of values lined up (displaying both functional and scaler relationships)

Equal parts: The whole is divided into parts of equal area or value.

Fraction - The result of dividing one integer by a second integer

Functional relationship: A function is a relation between a set of inputs and a set of permissible outputs with the property that each input is related to exactly one output. the vertical relationship on a double numberline

Multiplicative reasoning; Multiplicative thinking is indicated by a capacity to work flexibly with the concepts, strategies and representations of multiplication (and division) as they occur in a wide range of contexts.

Multiplicative relationship: A connection between two numbers through multiplication or division

Numberline: a line on which numbers are marked at intervals, used to illustrate simple numerical operations.

Part: A piece of the whole. A fraction of the total

Part/whole: part whole model is a pictorial representation that shows the relationship between a whole and its parts.

Proportion: if two variables x and y are related by an equation of the form y = kx, then y is directly proportional to x; it may also be said that y varies directly as x. When y is plotted against x this produces a straight line graph through the origin.

Ratio: A part to part comparison.

Scaler relationship: a multiplicative relationship - one-to-one or many-to-one relationship. The horizontal relationship on a double numberline

Whole: The total value - a full shape. E.g. 1 whole = 3 thirds.