



Year 7 Maths Learning Journey

Spring half term 2 – Decimals

Content – Including 'Big Questions'

Core knowledge; Using base 10 Place Value System	Complete
1. Base 10 place value system – “What is the meaning of each digit in base 10?”	
2. Rounding to the nearest ten, hundred, thousand – “Which column is the most important?”	
3. Decimal place value – “What is the meaning of each digit below the decimal point?”	
4. Multiplying 10,100,1000 – “When might I multiply by 10,100,1000?”	
5. Ordering decimals – “Which is the most significant digit?”	
6. Rounding decimals – “Which column is most important	
Core knowledge; Adding and subtracting with Decimals	Complete
7. Adding decimals -written methods, laws, derived facts, zero pairs – “Do decimals behave differently to whole numbers?”	
8. Adding/subtracting positive and negative decimal numbers – “What is the importance of the decimal point?”	
Core knowledge; Multiplication with Decimals	Complete
9. DIVIDING by 10, 100, 1000 - “When might I multiply by 10,100,1000?”	
10. Converting units – “When do I multiply and when do I divide?”	
11. Multiplying a decimal by a decimal – “Will multiplying by a decimal always make the product smaller?”	
12. Estimating square roots – “Can we find a square root of any number?”	
13. Estimation: order of operations – “When do we ne“When might I multiply by 10,100,1000?”ed to use order of operations?	

Learning Checkpoints

Learning Check Title	Score	Dirt
Using base 10 Place Value System		
Adding and subtracting with Decimals		
Multiplication with Decimals		



Key Vocabulary

Place value - The value of a digit that relates to its position or place in a number. Example: in 1482 the digits represent 1 thousand, 4 hundreds, 8 tens and 2 ones respectively; in 12.34 the digits represent 1 ten, 2 ones, 3 tenths and 4 hundredths respectively.

Place holder - In decimal notation, the zero numeral is used as a place holder to denote the absence of a particular power of 10.

Base 10 – the decimal number system is constructed on a base of 10. Each place value column is an increasing power of 10.

Zero – 1. Nought or nothing; zero is the only number that is neither positive nor negative.

2. Zero is needed to complete the number system.

3. In a place value system, a place-holder. Example: 105.

4. The cardinal number of an empty set.

Multiplicative - 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.

Additive - Additive thinking is indicated by a capacity to work flexibly with the concepts, strategies and representations of Addition (and subtraction) as they occur in a wide range of contexts.

Significant figures - The run of digits in a number that are needed to specify the number to a required degree of accuracy. Additional zero digits may also be needed to indicate the number's magnitude.

Integer - Any of the positive or negative whole numbers and zero. The integers form an infinite set; there is no greatest or least integer.

Decimal – Relating to the base ten.

Decimal fraction - Tenths, hundredths, thousandths etc represented by digits following a decimal point

Decimal number – any number using base 10

Decimal point - The decimal point is placed at the right of the ones column. Each column after the decimal point is a decimal place.

Decimal place – the place value of a digit to the right of the decimal point

Tenth – the first place value column to the right of the decimal point ($1/10$)

Hundredth - the second place value column to the right of the decimal point ($1/100$)

Thousandth - the third place value column to the right of the decimal point ($1/1000$)

Rounding - making a number simpler but keeping its value close to what it was.

Converting – to change to an equivalent unit

Estimate - 1. Verb: To arrive at a rough or approximate answer by calculating with suitable approximations for terms or, in measurement, by using previous experience.

2. Noun: A rough or approximate answer.

Zero pairs – two numbers with equal absolute value but opposite directed value

Square - the result of multiplying a number by itself. The product of two equal factors.

Square root – the inverse operation of squaring. A number whose square is equal to a given number