Holy Family Catholic School – Faculty of Mathematics Autumn Half-term 2 Year 7

Learning Intention	Vocab	Concept	Retrieval	Success Criteria	Hinge Questions	Red Zone
Week 9 Lesson 1 Understand place value for decimals.	Decimal Tenth Hundredth	NUMBER	Place value for integers	I will be able to: • Understand place value on a number line • Compare numbers using place value charts • Break numbers down into tenths, hundredths and thousandths	Which of the numbers has 8 hundredths? A 845 B 45.08 C 5.800 D 4.008	Complete the part-whole models. a) 0.58 / 0.5 c) 0.05 / 0.7 b) 1.5 d) 0.6 / 0.035 What is the value of the 5 in each number? How do the part-whole models help you?

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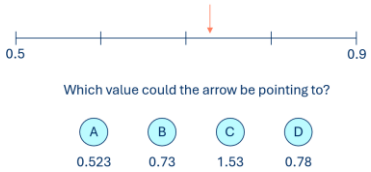
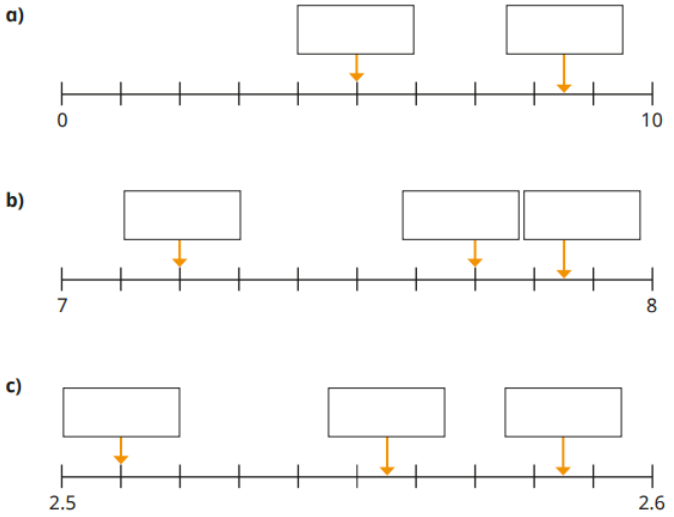
Week 9 Lesson 2 Place decimals on a number line	Decimal Tenth Hundredth Interval	NUMBER	Labelling number lines for integers	I will be able to: • Calculate the value of an interval on a number line • Label missing decimals in a number line		Write the numbers that the arrows are pointing to. 
Week 9 Lesson 3 Compare and order decimals	Decimal Tenth Hundredth	NUMBER	Order integers	I will be able to: • Order decimals written to 1, 2, or 3 decimal places	85.51 > 85. ☐ 1 The missing digit could be... The missing digit can't be... The missing digit must be...	Write < or > to make each statement correct. a) 0.84 ◯ 0.54 d) 14.376 ◯ 12.637 b) 7.98 ◯ 7.89 e) 4 thousandths ◯ 8 thousandths c) 572.1 ◯ 573.4 f) Two hundredths ◯ 0.006

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Week 10 Lesson 1 Round integers to powers of 10	Round Estimate	NUMBER	Place value of integers	I will be able to: • Round numbers to the nearest 10, 100 and 1000	Which of the values round to 380 to the nearest 10? A 386 B 382 C 375 D 373	Complete the table. Number / Rounded to the nearest 10000 / Rounded to the nearest 1000 / Rounded to the nearest 100 36 892 81 055 7908 126 388
Week 10 Lesson 2 Round to the nearest integer	Rounding Integer Decimal	NUMBER	Round integers to powers of 10	I will be able to: • Round to the nearest whole number	Which of the numbers round to 300 to the nearest integer? A 301 B 300.09 C 300.5 D 299	**a)** Circle the numbers that round to 8 when rounded to the nearest integer. **8.3 7.31 7.9 7.45 8.63 8.05** **b)** Circle the numbers that round to 28 when rounded to the nearest integer. **27.45 27.6 28.2 29.12 27.06 28.53**

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Week 10 Lesson 3 Round using decimal places	Rounding Decimals	NUMBER	Round numbers to the nearest integer	I will be able to: • Round numbers to 1, 2, or 3 decimal places	Which of the numbers could be rounded to 4.68 to 2 decimal places? A 4.689 B 4.6081 C 4.682 D 4.685	Complete the table. Number | Rounded to 1 decimal place | Rounded to 2 decimal places | Rounded to 3 decimal places 0.7259 8.03561 23.541982 $\frac{7}{12}$ π
Week 11 Lesson 1 Addition and subtraction of integers	Addition Subtraction	NUMBER	Addition and subtraction of 2 digit numbers	I will be able to: • Add 2, 3, and 4 digit integers • Subtract 2, 3 and 4 digit integers	Which calculations are equivalent to 82 + 99? A 80 + 90 + 2 + 9 B 81 + 100 C 100 + 80 + 2 D 82 + 100 − 1	Work out the unknown numbers. a) 329 + ☐ = 924 c) 2945 − ☐ = 199 b) ☐ + 4003 = 5999 d) ☐ − 2809 = 572

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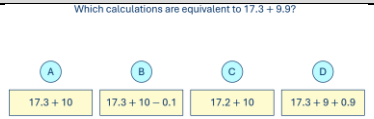
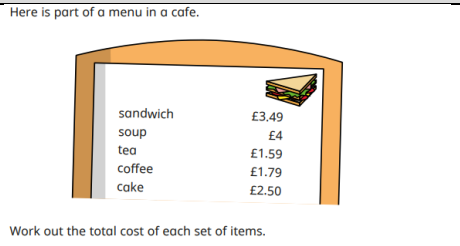
Learning Intention	Vocab	Concept	Retrieval	Success Criteria	Hinge Questions	Red Zone
Week 11 Lesson 2 Addition and subtraction of decimals	Addition Subtraction Decimals	NUMBER	Addition and subtraction of decimals	I will be able to • Add numbers with 1, 2 or 3 decimal places • Subtract numbers with 1, 2 or 3 decimal places		

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Learning Intention	Vocab	Concept	Retrieval	Success Criteria	Hinge Questions	Red Zone
Week 11 Lesson 3 Multiply and divide by powers of 10.	Multiply Divide Ten Hundred Thousand	NUMBER	Multiply and divide integers by 10 and 100.	I will be able to: • Multiply integers and decimals by 10, 100 and 1000 • Divide integers and decimals by 10, 100 and 1000	8.5 × 1000 Which is the correct answer? A 8.5000 B 85 C 850 D 8500	Fill in the missing numbers. a) 0.409 ÷ ☐ = 0.0409 b) ☐ × 100 = 24040 c) 1000 × ☐ = 0.8 d) ☐ ÷ 1000 = 1056 e) 42 ÷ 1000 × ☐ = 4.2 f) 0.103 = 1.03 × ☐ ÷ 100
Week 12 Lesson 1 Multiplication of integers	Multiplication Long multiplication	NUMBER	Knowledge of times tables	I will be able to • Multiply 2 and 3 digit numbers by a single digit • Multiply 2 and 3 digit numbers by 2 digit numbers	Is the statement true or false? $26 \times 42 = 20 \times 40 + 6 \times 2$	A teacher is arranging a school trip. The trip costs £4000 in total. 142 students pay £28 each towards the total cost of the trip. The school pays the rest of the cost. Work out how much the school needs to pay towards the total cost of the trip.

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Week 12 Lesson 2 Division of integers	Division Long Division Integer	NUMBER	Times tables	I will be able to • Divide 2 and 3 digit numbers by integers, to give both integer and decimal answers	Is the statement true or false? 1156 ÷ 12 is the same as 1156 ÷ 4 ÷ 3	Solve the equations. **a)** $4g = 167$ **c)** $3k = 901$ $g =$ $k =$ **b)** $8m = 517$ **d)** $32w = 1960$ $m =$ $w =$
Week 12 Lesson 3 Multiply decimals	Multiply Decimal Integer	NUMBER	Multiply integers	I will be able to • Multiply decimals by integers • Multiply decimals by other decimals • Find answers to related decimal calculations	Which calculations are equivalent to 9.7 × 19? A 97 × 1.9 B 9.7 × 1.9 C 970 × 0.19 D 9700 × 0.019	723 × 84 = 60732 Use the given calculation to fill in the missing numbers. **a)** 72.3 × ☐ = 607.32 **c)** ☐ × 0.84 = 607.32 **b)** ☐ × 7.23 = 607320 **d)** 6.0732 = ☐ × 8.4

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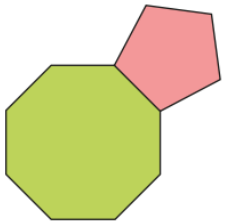
Week 13 Lesson 1 Divide decimals	Division Decimals Integers	NUMBER	Divide integers	I will be able to: • Divide decimals by integers	Which calculations are equivalent to $2.34 \div 15$? A: $2.34 \div 5 \div 5$ B: $2.34 \div 5 \div 3$ C: $2.34 \div 3 \div 5$ D: $2.34 \div 5 \div 2$	A shape is made up of a regular octagon and a regular pentagon. The octagon has a perimeter of 29.76 cm. Work out the perimeter of the pentagon.  _____ cm
Week 13 Lesson 2 Use BIDMAS to find answers to calculations	BIDMAS Order of operations	NUMBER	Order of operations	I will be able to • Use BIDMAS to find answers to complex calculations	$4^2 \times 2 + 3 \times 4$ Which is the correct answer? A: 140 B: 28 C: 44 D: 320	Insert brackets into the calculations to make the answers correct. **a)** $5 - 20 + 2 \div 11 = 3$ **b)** $21 = 5 + 4 \times 15 - 11$

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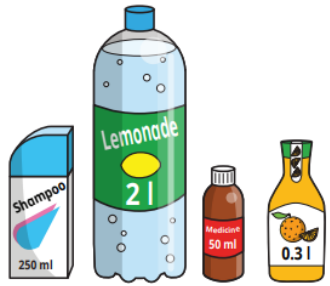
Week 13 Lesson 3 Calculate the mean for a set of numbers	Average Mean	STATISTICS	Averages Addition Division	I will be able to • Calculate the mean for a set of numbers	4, 7, 3, y, 2 The mean of the numbers is 5 What is the correct value of y? A 5 B 9 C 4 D 25	The table shows the temperatures at noon on five days of the week. Day: Monday, Tuesday, Wednesday, Thursday, Friday Temperature: 19 °C, 23 °C, 24 °C, 16 °C, 14 °C **a)** Work out the mean temperature for the first five days. ____ °C On Saturday, the temperature at noon is 15 °C. **b)** Work out the mean average temperature for the first six days. ____ °C
Week 14 Lesson 1 Calculate the mode and median for a set of numbers	Average Mode Median	STATISTICS	Averages Ordering numbers	I will be able to • Calculate the mode for a set of numbers • Calculate the median for a set of numbers	food item: pizza 4, hotdogs 3, nachos 8, burgers 4 Which is the modal category? A pizza B hotdogs C nachos D burgers	The amount of liquid in each container is shown on the labels.  Work out the median amount of liquid in the containers.

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Week 14 Lesson 2 Calculate the range for a set of numbers	Average Range Spread	STATISTICS	Ordering numbers Subtraction	I will be able to • Calculate the range for a set of numbers	Here is a list of numbers with a range of 9  What are the possible values of the missing number?	Here are the number of goals scored by a football team in its first five matches. 3 2 2 1 4 The football team plays another match and the range increases to 4 goals. How many goals could the team have scored in the 6th match? Explain why there is more than one possible answer.
Week 14 Lesson 3 Solve problems using averages	Average Mean Mode Median Range Compare	STATISTICS	Calculate mean, mode median and range	I will be able to • Solve problems involving different types of averages	 • The mean of the cards is 6.5 • The median is less than the mean • The range of the cards is 6 What could the values of the unknown cards be?	Rosie is y years old. Ann is 2 years older. Mr Lee is twice Rosie's age. **a)** Write an expression for the mean of their ages. **b)** The total of their ages is 42 Work out Rosie's age. years

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Week 15 Lesson 1 Round numbers using significant figures	Rounding Significant figures	NUMBER	Round integers and decimals	I will be able to: • Round numbers to 1 significant figure • Round numbers to 2 or 3 significant figures	Is the statement true or false? 750 rounded to 1 significant figure is 800	The attendance at a hockey match is 28765 **a)** Round this number to 1 significant figure. ☐ The number of people who attended a different hockey match is 60000 rounded to 1 significant figure. **b)** What is the greatest possible number of people who attended the hockey match? ☐ **c)** What is the smallest possible number of people who attended the hockey match? ☐
Week 15 Lesson 2 Estimate answers to calculations	Rounding Significant figures Estimate	NUMBER	Rounding numbers using significant figures	I will be able to: • Estimate the answer to a calculation by rounding the numbers to 1 significant figure	318.4 x 1.89 Use estimation to decide which answer is correct. A 60.1776 B 601.776 C 6017.76 D 60 177.6	A farmer has 2897 apples. She wants to put the apples in boxes of 14 **a)** Estimate how many boxes the farmer can fill. **b)** Is your answer an underestimate or an overestimate?

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Week 15 Lesson 3 Solve problems using estimation	Rounding Significant figures Estimate	NUMBER	Rounding numbers using significant figures Estimation	I will be able to: • Solve maths problems in a variety of contexts using estimation	Is the statement true or false? When multiplying two numbers, if both given numbers are rounded up to estimate, the answer will be an overestimate.	A factory sells 1782 gadgets each day. Each gadget sells for £19.75 **a)** Estimate the total amount of money received by the factory in a day. £ ☐ **b)** Is your estimate an overestimate or an underestimate? _____ Explain your answer.