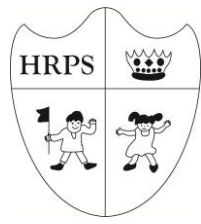


Houghton Regis Primary School Calculation Summary Policy

Years 5 and 6

	Addition	Subtraction	Multiplication	Division
Y5	<ul style="list-style-type: none"> ✓ Children should use column addition to add two or three whole numbers with up to 5 digits $\begin{array}{r} 21848 \\ + 1523 \\ \hline 23371 \\ \hline 1 \quad 1 \end{array}$ <ul style="list-style-type: none"> ✓ Use column addition to add any pair of 2-place decimal numbers, including amounts of money $\begin{array}{r} 154.75 \\ + 233.82 \\ \hline 388.57 \\ \hline 1 \end{array}$ <ul style="list-style-type: none"> ✓ Begin to add related fractions using equivalences e.g. $1/2 + 1/6 = 3/6 + 1/6$ ✓ Choose the most efficient method in any given situation 	<ul style="list-style-type: none"> ✓ Use compact or expanded column subtraction to subtract numbers with up to 5 digits and using decimal numbers <p style="text-align: center;">e.g. $12731 - 1367 = 11364$</p> <p><i>In this example, it has been necessary to exchange from the tens and the hundreds columns.</i></p> $\begin{array}{r} 12731 \\ - 1367 \\ \hline 11364 \end{array}$ <ul style="list-style-type: none"> ✓ Use complementary addition for subtractions where the larger number is a multiple or near multiple of 1000 <p>$3002 - 1997 = 1005$</p> <ul style="list-style-type: none"> ✓ Use complementary addition for subtractions of decimal numbers with up to 2 places, including amounts of money ✓ Begin to subtract related fractions using equivalences e.g. $1/2 - 1/6 = 2/6$ ✓ Choose the most efficient method in any given situation 	<ul style="list-style-type: none"> ✓ Use short multiplication to multiply a 1-digit number by a number with up to 4 digits $\begin{array}{r} 2307 \\ \times 8 \\ \hline 18456 \end{array}$ <ul style="list-style-type: none"> ✓ Use long multiplication to multiply 3-digit and 4-digit numbers by a number between 11 and 20 $\begin{array}{r} 1431 \\ \times 15 \\ \hline 7155 \quad (1431 \times 5) \\ 14310 \quad (1431 \times 10) \\ \hline 21465 \end{array}$ <ul style="list-style-type: none"> ✓ Choose the most efficient method in any given situation ✓ Find simple percentages of amounts e.g. 10%, 5%, 20%, 15% and 50% ✓ Begin to multiply fractions and mixed numbers by whole numbers ≤ 10 e.g. $4 \times 2/3 = 8/3 = 2 \frac{2}{3}$ 	<ul style="list-style-type: none"> ✓ Use short division to divide a number with up to 4 digits by a number ≤ 12 <p>e.g. $4768 \div 8 = 596$</p> $\begin{array}{r} 596 \\ 8 \overline{)4768} \\ \underline{8476} \\ 8 \\ \underline{8} \\ 0 \end{array}$ <ul style="list-style-type: none"> ✓ Give remainders as whole numbers or as fractions/decimals $\begin{array}{r} 86 \text{ r}2 \text{ or } 2/5 \text{ or } 0.4 \\ 5 \overline{)432} \\ \underline{543} \\ 2 \end{array}$ <ul style="list-style-type: none"> ✓ Find non-unit fractions of large amounts ✓ Turn improper fractions into mixed numbers and vice versa ✓ Choose the most efficient method in any given situation
Y5 EOY expectations	Add numbers with only 2 digits which are not zeros e.g. $3 \cdot 4 + 5 \cdot 8$ Derive swiftly and without any difficulty number bonds to 100 Add 'friendly' large numbers using knowledge of place value and number facts Use expanded column addition to add pairs of 5- and 6-digit numbers	Derive swiftly and without difficulty number bonds to 100 Use counting up with confidence to solve most subtractions, including finding complements to multiples of 1000 e.g. $3000 - 2387$	Know multiplication tables to 12×12 Multiply whole numbers and 1-place decimals by 10, 100 and 1000 Use knowledge of factors as aids to mental multiplication e.g. 13×6 is double 13×3 e.g. 23×5 is $\frac{1}{2}$ of 23×10 Use the short method of multiplication to multiply numbers with up to 4 digits by 1-digit numbers Use the long method to multiply 2-digit numbers by 2-digit numbers	Know by heart division facts up to $144 \div 12$ Divide whole numbers by 10, 100 or 1000 to give answers with up to 1 decimal place Use doubling and halving as mental division strategies Use an efficient written method to divide numbers $\leq 1,000,000$ by 1-digit numbers Find unit fractions of 2- and 3-digit numbers
Y6	<ul style="list-style-type: none"> ✓ Use column addition to add numbers with up to 5 digits $\begin{array}{r} 12462 \\ + 8456 \\ \hline 20918 \\ \hline 1 \quad 1 \end{array}$ <ul style="list-style-type: none"> ✓ Use column addition to add decimal numbers with up to 3 decimal places ✓ Add mixed numbers and fractions with different denominators 	<ul style="list-style-type: none"> ✓ Use column subtraction to subtract numbers with up to 6 digits ✓ Use complementary addition for subtractions where the larger number is a multiple or near multiple of 1000 or 10 000 ✓ Use complementary addition for subtractions of decimal numbers with up to 3 places, including money ✓ Subtract mixed numbers and fractions with different denominators 	<ul style="list-style-type: none"> ✓ Use short multiplication to multiply a 1-digit number by a number with up to 4 digits $\begin{array}{r} 2307 \\ \times 8 \\ \hline 18456 \end{array}$ <ul style="list-style-type: none"> ✓ Use long multiplication to multiply a 2-digit number by a number with up to 4 digits <p>e.g. $1431 \times 23 = 32913$</p> $\begin{array}{r} 1431 \\ \times 23 \\ \hline 4293 \quad (1431 \times 3) \\ 28620 \quad (1431 \times 20) \\ \hline 32913 \\ \hline 1 \quad 1 \end{array}$ <ul style="list-style-type: none"> ✓ Use short multiplication (example as long multiplication) to multiply a 1-digit number by a number with 1 or 2 decimal places, including amounts of money <p>e.g. $5 \times 7.23 = 36.15$</p> $\begin{array}{r} 5 \\ \times 7.23 \\ \hline 35 \quad (5 \times 7) \\ 10 \quad (5 \times 0.2) \\ 0.15 \quad (5 \times 0.03) \\ \hline 36.15 \end{array}$ <ul style="list-style-type: none"> ✓ Multiply fractions and mixed numbers by whole numbers ✓ Multiply fractions by proper fractions 	<ul style="list-style-type: none"> ✓ Use short division to divide a number with up to 4 digits by a 1-digit or a 2-digit number <p>e.g. $4768 \div 8 = 596$</p> $\begin{array}{r} 596 \\ 8 \overline{)4768} \\ \underline{8476} \\ 8 \\ \underline{8} \\ 0 \end{array}$ <ul style="list-style-type: none"> ✓ Use long division to divide 3-digit and 4-digit numbers by 'friendly' 2-digit numbers <p>e.g. $2875 \div 25 = 115$</p> $\begin{array}{r} 115 \\ 25 \overline{)2875} \\ \underline{25} \\ 37 \\ \underline{30} \\ 75 \\ \underline{75} \\ 0 \end{array}$ <ul style="list-style-type: none"> ✓ Give remainders as whole numbers or as fractions or as decimals ✓ Divide a 1-place or a 2-place decimal number by a number ≤ 12 using multiples of the divisors ✓ Divide proper fractions by whole numbers



Houghton Regis Primary School Calculation Summary Policy Years 5 and 6

	Addition	Subtraction	Multiplication	Division
			✓ Use percentages for comparison and calculate simple percentages	
Y6 EOY expectations	Derive, swiftly and without difficulty, number bonds to 100 Use place value and number facts to add 'friendly' large or decimal numbers e.g. $3 \cdot 4 + 6 \cdot 6$ e.g. $26\ 000 + 54\ 000$ Use column addition to add numbers with up to 6-digits Use column addition to add pairs of 2-3 place decimal numbers	Use number bonds to 100 to perform mental subtraction of numbers up to 1000 by complementary addition e.g. $1000 - 654$ as $46 + 300$ in our heads Use complementary addition for subtraction of integers up to 10 000 e.g. $2504 - 1878$ Use complementary addition for subtractions of 1-place decimal numbers and amounts of money e.g. $\pounds 7 \cdot 30 - \pounds 3 \cdot 55$	Know by heart all the multiplication facts up to 12×12 Multiply whole numbers and 1- and 2-place decimals by 10, 100 and 1000 Use an efficient written method to multiply a 1-digit or a teen number by a number with up to 4 digits by partitioning Multiply a 1-place decimal number up to 10 by a number ≤ 100	Know by heart all the division facts up to $144 \div 12$ Divide whole numbers by 10, 100, 1000 to give whole number answers or answers with up to 2 decimal places Use an efficient written method, involving subtracting powers of 10 times the divisor, to divide any number of up to 1000 by a number ≤ 12 e.g. $836 \div 11$ as $836 - 770$ (70×11) leaving 66 which is 6×11 , giving the answer 76 Find remainders for division that convert to decimals or fractions Divide a 1-place decimal by a number ≤ 10 using place value and knowledge of division facts