St Barnabas
Church of England Primary Academy
A member of ☦DARI
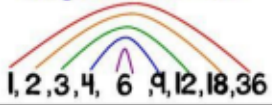Learning and growing together in a love-filled Christian family
St Barnabas

Year 5 Fluency

Rapid Recall

- Addition and subtraction of multiples of 10 (e.g. 70 + 30 = 100, 50 + 60 = 110, 20 + 40 = 60);
- Addition and subtraction of multiples of 100 (e.g. 300 + 400 = 700, 400 + 600 = 1,000, 800 + 500 = 1,300);
- Addition and subtraction of multiples of 1000 (e.g. 3000 + 4000 = 7000);
- Double and halves of multiples of 10 to 100 (e.g. double 60 = 120, half 50 = 25);
- Quadruples (x4) of all numbers to 10 (e.g. 6 x 4 = 24);
- Multiplying two-digit numbers by 10. (e.g. 24 x 10 = 240);
- Halves of any number to 100 (e.g. half of 22 = 11, half of 51 = 25.5);
- Multiplying and dividing any number by 10 and 100 (e.g. 24 x 100 = 2,400, 45 ÷ 100 = 0.45, 3.4 x 10 = 34);
- Squares of all number up to 12;
- And cubes of 2,3,4 and 5.

Mental Calculations (Jottings may be needed)

Addition and Subtraction Mental Calculation Skills (Working mentally with jottings)	Methods or Strategies	Multiplication and Division Mental Calculation Skills (Working mentally with jottings)	Methods or Strategies
- Add or subtract a pair of two-digit numbers or three-digit multiples	- Count on or back in hundreds, tens,	- Multiply any two-digit number by 4 and 8.	- Multiply or divide by 4 or 8 by repeated

of 10. e.g. 30 + 90, 360 - 240, 220 + 460 - Add or subtract a near multiple of 10 or 100 to any two-digit or three-digit number. e.g. 34 + 39, 87 - 49, 432 + 190, - Find the difference between two near multiples of 100 and 1000 (count up the difference by using a number line, bridge through multiples of 100). e.g. 6800 - 3040, 608 - 375 - Add or subtract any pairs of decimal fractions with ones and tenths. e.g. 5.6 + 2.6, 6.5 - 3.8 - Count on or back in minutes and hours bridging through 60 (analogue and digital times) e.g. mental jottings (time number line)	ones and tenths. - Partition: Add hundreds, tens and ones separately and then recombine. - Subtract by counting up from a smaller to a larger number (only when it is the most efficient method). - Add or subtract a multiple of 10 or 100 and adjust. e.g. 264 + 88 (add 90 and subtract 2), 826 - 198 (subtract 200 and add 2). - Double and adjust.. - Use knowledge of place value and related calculations. e.g. 7.2 - 4.3 using 72 - 43.	e.g. 32 x 4, 88 divided by 8 - Multiply two-digit numbers by 5 or 20 using doubling or halving. e.g. 42 x 20, 36 x 5 - Multiply by 25 and 50. e.g. 42 x 25, 36 x 50 - Double of 3 digit multiples of 10 to 500 and corresponding halves. e.g. 240 x 2, 480 divided by 2 - Find remainders when dividing a 2 digit number by a single digit number. e.g. 34 divided by 8 = 4 R2 - Multiply and divide whole numbers and decimals by 10, 100 or 1000. e.g. 7.2 x 1000, 68 divided by 100, 4.2 x 10 - Multiply a pair of multiples of 10 and a multiply a multiple of 100 by a single digit. e.g. 40 x 60, 400 x 8 - Divide a multiple of 10 by a single digit number (whole number answers only) e.g. 320 divided by 4. - Find fractions of whole numbers or quantities. e.g. ⅜ of 64, ⅔ of 30 - Find 10, 25 and	doubling and halving. - Form an equivalent calculation e.g. Multiply by 5 by multiplying by 10 and halving. Multiply by 20 by doubling and times by ten. - Use knowledge of doubles and halves and place value. E.g. When you multiply by 50, multiply by 100 and halve the answer. - Use knowledge of division facts when finding a remainder. - Use understanding that when you multiply or divide a number by 10 and 100, its digits move 1 or 2 places to the left or right. - Use knowledge of multiplication and division facts and understanding of place value when calculating with multiples of 10. - Use knowledge of equivalence between fractions and percentages. 50% = ½ 25% = ¼ 10% = 1/10

		50% of whole numbers and quantities. e.g. 10% of 80, 25% of 80 - Factor pairs of numbers to 100 e.g. 42 has factor pairs of: 42 and 1 21 and 2 14 and 3 7 and 6	- Use knowledge of multiplication and division facts to find factor pairs. **Factor Pairs** What are all the numbers you can multiply together to get your target number? **Target Number = 36** 1, 2, 3, 4, 6, 9, 12, 18, 36 This can be done by creating factor rainbows.