

Year 5 2<sup>nd</sup> Autumn Half-Term Constant Difference [For Parents & Carers | White Rose Maths](#)

Date	Question
	a. $3259 + 304 + 20365 =$ b. $1000 - 187 =$ c. $987 \times 100 =$ d. $180 \div 100 =$
	a. $7392 + 418 + 2708 =$ b. $7000 - 409 =$ c. $230 \times 100 =$ d. $12 \div 10 =$
	a. $\pounds 73.26 + 98\text{p} + \pounds 64.51 =$ b. $\pounds 8 - \pounds 4.51 =$ c. $406 \times 100 =$ d. $1290 \div 100 =$
	a. $8 + \pounds 3.56 + 19\text{p} =$ b. $\pounds 30 - \pounds 14.07 =$ c. $? \times 100 = 35$ d. $7200 \div 100 =$
	a. $\pounds 3.25 + \pounds 203.65 + 50\text{p} =$ b. $\pounds 20 - 871\text{p} =$ c. $5.76 \times 10 =$ d. $6090 \div 100 =$
	a. $\pounds 8.73 + \pounds 123.89 + 79\text{p} =$ b. $\pounds 50 - 99\text{p} =$ c. $? \times 100 = 56$ d. $2030 \div 100 =$

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Year 5 Recall +/-/x/÷	Ex. Mental Calculations ... jottings if needed	Mental Strategies +/-/x/÷ ...how & when to apply strategies
<ul style="list-style-type: none"> <li>• sums and differences of decimals, e.g. <math>6.5 + 2.7</math>, <math>7.8 - 1.3</math></li> <li>• doubles and halves of decimals, e.g. half of 5.6, double 3.4</li> <li>• what must be added to any four- digit number to make the next multiple of 1000,</li> <li>• what must be added to a decimal with units and tenths to make the next whole number,</li> <li>• Recall squares to <math>12 \times 12</math></li> </ul>	<ul style="list-style-type: none"> <li>• + or - a pair of two-digit numbers or three-digit multiples of 10, e.g. <math>30 + 80</math>, <math>620 - 380</math>, <math>350 + 360</math></li> <li>• + or - a near multiple of 10 or 100 to any two-digit or three-digit number mentally, e.g. <math>230 + 190</math></li> <li>• find the difference between near multiples of 100, e.g. <math>607 - 588</math>, or of 1000, e.g. <math>6070 - 4087</math> (Jottings to help this calculation: count up the difference on a number line, bridging through key multiples of 100):</li> </ul>	<ul style="list-style-type: none"> <li>• count on or back in Hs, <u>Ts</u>, <u>Os</u> and tenths (starting from any integer or decimal)</li> <li>• partition: add Hs, <u>Ts</u> or <u>Os</u> separately, then recombine</li> <li>• subtract by counting up from the smaller to the larger number (where efficient due to numbers close together or near multiples)</li> <li>• + or - a multiple of 10 or 100 and adjust (e.g. <math>235 + 198</math> (+ 200 mentally and - 2); <math>964 + 88</math> (+ 90, then - 2); <math>621 - 39</math> (- 40 then + 1 back on)</li> <li>• partition: double and adjust</li> </ul>

<ul style="list-style-type: none"> <li>• Recall division facts corresponding to tables up to <math>12 \times 12</math>, and the related unit fractions, e.g. <math>7 \times 9 = 63</math> so one-ninth of 63 is 7 and one-seventh of 63 is 9</li> </ul>	<ul style="list-style-type: none"> <li>• + or - any pairs of decimal fractions each with units and tenths, e.g. <math>5.7 + 2.5</math>, <math>6.3 - 4.8</math></li> <li>• multiply and divide two-digit numbers by 4 or 8, e.g. <math>26 \times 4</math>, <math>96 \div 8</math></li> <li>• multiply two-digit numbers by 5 or 20, e.g. <math>320 \times 5</math>, <math>14 \times 20</math> using doubling and halving</li> <li>• multiply by 25 or 50, e.g. <math>48 \times 25</math>, <math>32 \times 50</math></li> <li>• double three-digit multiples of 10 to 500, e.g. <math>380 \times 2</math>, and find the corresponding halves, e.g. <math>760 \div 2</math></li> <li>• find the remainder after dividing a two-digit number by a single-digit number, e.g. <math>27 \div 4 = 6 \text{ R } 3</math></li> <li>• multiply and divide whole numbers and decimals by 10, 100 or 1000, e.g. <math>4.3 \times 10</math>, <math>0.75 \times 100</math>, <math>25 \div 10</math>, <math>673 \div 100</math>, <math>74 \div 100</math></li> <li>• multiply pairs of multiples of 10, e.g. <math>60 \times 30</math>, and a multiple of 100 by a single digit number, e.g. <math>900 \times 8</math></li> <li>• divide a multiple of 10 by a single-digit number (whole number answers) e.g. <math>80 \div 4</math>, <math>270 \div 3</math></li> <li>• find fractions of whole numbers or quantities,</li> </ul>	<ul style="list-style-type: none"> <li>• use knowledge of place value and related calculations, e.g. <math>6.3 - 4.8</math>, using <math>63 - 48</math></li> <li>• partition for calculation with time: count on or back in minutes and hours, bridging through 60 (analogue and digital times): Mental jottings as a 'time number line':</li> <li>• multiply or divide by 4 or 8 by repeated doubling or halving</li> <li>• form an equivalent calculation, e.g. to multiply by 5, multiply by 10, then halve; to multiply by 20, double, then multiply by 10</li> <li>• use knowledge of doubles/halves and understanding of place value, e.g. when multiplying by 50 multiply by 100 and divide by 2</li> <li>• use knowledge of division facts, e.g. when to find a remainder</li> <li>• use understanding that when a number is multiplied or divided by 10 or 100, its digits move one or two places to the left or the</li> </ul>
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- Recall percentage equivalents of one-half, one-quarter, three-quarters, tenths and hundredths
- Recall / find factor pairs to 100
- Recall prime numbers up to 19

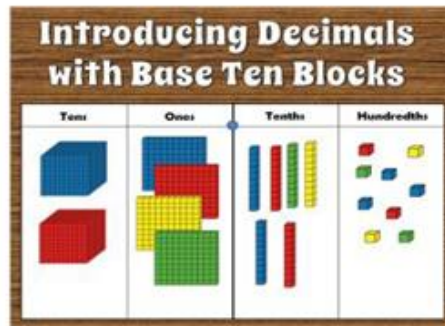
x	1	2	3	4	5	6	7	8	9	10	11	12
1	1	2	3	4	5	6	7	8	9	10	11	12
2	2	4	6	8	10	12	14	16	18	20	22	24
3	3	6	9	12	15	18	21	24	27	30	33	36
4	4	8	12	16	20	24	28	32	36	40	44	48
5	5	10	15	20	25	30	35	40	45	50	55	60
6	6	12	18	24	30	36	42	48	54	60	66	72
7	7	14	21	28	35	42	49	56	63	70	77	84
8	8	16	24	32	40	48	56	64	72	80	88	96
9	9	18	27	36	45	54	63	72	81	90	99	108
10	10	20	30	40	50	60	70	80	90	100	110	120
11	11	22	33	44	55	66	77	88	99	110	121	132
12	12	24	36	48	60	72	84	96	108	120	132	144

### Prime Numbers

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20

- e.g.  $\frac{2}{3}$  of 27,  $\frac{4}{5}$  of 70 kg
- find 50%, 25% or 10% of whole numbers or quantities, e.g. 25% of 20 kg, 10% of £80
  - find factor pairs for numbers to 100, e.g. 30 has the factor pairs  $1 \times 30$ ,  $2 \times 15$ ,  $3 \times 10$  and  $5 \times 6$

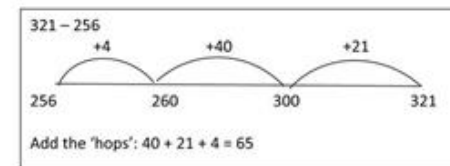
- 4
- 9
- 16
- 25
- 36



hundreds	tens	ones	tenths	hundredths
			.	
			.	
			.	

- right relative to the decimal point, and zero is used as a place holder
- use knowledge of multiplication and division facts and understanding of place value, e.g. calculating with multiples of 10
- use knowledge of equivalence between fractions and percentages, e.g. to find 50%, 25% and 10%
- use knowledge of multiplication and division facts to find factor pairs ('Factor pairs' - starts with 1 and the number itself, then all the other possible pairs in order)

$$\begin{array}{r}
 128 + 214 = 342 \\
 \begin{array}{r}
 100 \quad 20 \quad 8 \\
 200 \quad 10 \quad 4
 \end{array} \\
 100 + 200 = 300 \\
 20 + 10 = 30 \\
 8 + 4 = 12 \\
 300 + 30 + 12 = 342
 \end{array}$$



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Mental Strategies: multiply and divide whole numbers and decimals by 10, 100 or 1000...

$\times 10$  jump 1 column to larger left  $\times 100$  jump 2 columns to larger left

$\div 10$  jump 1 column to reduced right  $\div 100$  jump 2 columns to reduced right

Ex. a)  $74 \times 10 =$  b)  $740 \times 100 =$  c)  $4.3 \times 1000,$

d)  $750 \div 10 =$  e)  $250 \div 100 =$  f)  $6700 \div 1000$

					$\frac{1}{10}$	$\frac{1}{100}$
t.	th	h	t	u	.	
					.	
					.	

**Constant difference method opposite to aid subtraction.**

## Calculation Homework – Policy on... The Redeemer Website

Wk 1: a.  $3259 + 304 + 20365 =$

b.  $1000 - 187 =$

c.  $987 \times 100 =$

d.  $180 \div 100 =$

Wk 2: a.  $7392 + 418 + 2708 =$

b.  $7000 - 409 =$

c.  $230 \times 100 =$

d.  $12 \div 10 =$

Wk 3: a.  $£73.26 + 98p + £64.51 =$

b.  $£8 - £4.51 =$

c.  $406 \times 100 =$

d.  $1290 \div 100 =$

Wk 4: a.  $£8 + £3.56 + 19p =$

b.  $£30 - £14.07 =$

c.  $? \times 100 = 35$

d.  $7200 \div 100 =$

Wk 5: a.  $£3.25 + £203.65 + 50p =$

b.  $£20.00 - 871p =$

c.  $5.76 \times 10 =$

d.  $6090 \div 100 =$

Wk 6: a.  $£8.73 + £123.89 + 79p =$

b.  $£50 - 99p =$

c.  $? \times 100 = 56$

d.  $2030 \div 100 =$

4	0	0	0	-	1	=	3	9	9	9
-	4	9	7	-	1	=	4	9	6	
<hr/>										
<b>No exchange needed</b>										



3 / 6 / 12 times tables

