



Autumn

Home

Learning Year 5

Pack F

Maths



In this pack, you will find:

Maths

10 times table activities

2 calculation practise activity
pages

(for the 4 operations)

2 place value activity pages

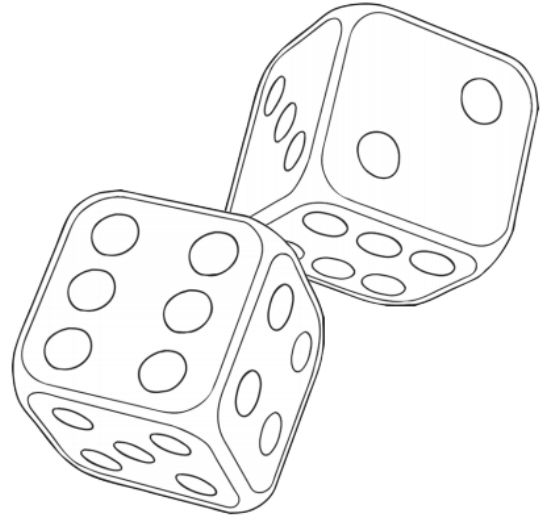
2 problem solving activity pages

2 reasoning activity pages

Times tables

activities

Times table Practise 1



How to play:

1. Roll the dice.
2. Multiply your two numbers.
3. Colour your answer on the grid.
4. The first person to colour four in a row wins!

18	12	24	8	10	24	6	15
36	30	12	9	2	5	4	18
4	24	4	8	6	8	15	3
10	12	25	15	20	6	16	8
36	12	12	30	5	12	5	30
10	25	1	9	5	6	10	20
18	20	9	10	16	15	4	3
1	30	4	20	2	3	6	15

Times table Practise 2

Count in 8s and colour in the grid:

1	2	3	4	5	6	7	8	9	10	11	12
13	14	15	16	17	18	19	20	21	22	23	24
25	26	27	28	29	30	31	32	33	34	35	36
37	38	39	40	41	42	43	44	45	46	47	48
49	50	51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70	71	72
73	74	75	76	77	78	79	80	81	82	83	84
85	86	87	88	89	90	91	92	93	94	95	96
97	98	99	100	101	102	103	104	105	106	107	108
109	110	111	112	113	114	115	116	117	118	119	120
121	122	123	124	125	126	127	128	129	130	131	132
133	134	135	136	137	138	139	140	141	142	143	144

Work out these answers:

a) $2 \times 8 =$ _____

d) $8 \times 8 =$ _____

b) $10 \times 8 =$ _____

e) $7 \times 8 =$ _____

c) $5 \times 8 =$ _____

f) $12 \times 8 =$ _____

How many blocks are there?

a)  _____ \times _____ = _____

b)  _____ \times _____ = _____

c)  _____ \times _____ = _____

Times table Practise 3

Mixed Tables Test 1

Check

1.	$10 \times 7 =$		
2.	$5 \times 7 =$		
3.	$2 \times 7 =$		
4.	$11 \times 10 =$		
5.	$5 \times 12 =$		
6.	$11 \times 2 =$		
7.	$10 \times 4 =$		
8.	$5 \times 10 =$		
9.	$5 \times 2 =$		
10.	$3 \times 10 =$		
11.	$5 \times 6 =$		
12.	$2 \times 8 =$		
My score:			

Check

13.	$10 \div 2 =$		
14.	$15 \div 5 =$		
15.	$12 \div 2 =$		
16.	$20 \div 10 =$		
17.	$20 \div 5 =$		
18.	$16 \div 2 =$		
19.	$10 \div 10 =$		
20.	$60 \div 5 =$		
21.	$4 \div 2 =$		
22.	$50 \div 10 =$		
23.	$50 \div 5 =$		
24.	$18 \div 2 =$		
My score last time:			

How I can improve:

Times table Practise 4

Check

1.	$11 \times 4 =$		
2.	$1 \times 6 =$		
3.	$11 \times 9 =$		
4.	$9 \times 12 =$		
5.	$3 \times 3 =$		
6.	$7 \times 12 =$		
7.	$2 \times 4 =$		
8.	$6 \times 7 =$		
9.	$3 \times 9 =$		
10.	$12 \times 6 =$		
11.	$8 \times 3 =$		
12.	$7 \times 10 =$		
My score:			

Check

13.	$16 \div 4 =$		
14.	$60 \div 6 =$		
15.	$9 \div 9 =$		
16.	$108 \div 12 =$		
17.	$33 \div 3 =$		
18.	$49 \div 7 =$		
19.	$24 \div 4 =$		
20.	$12 \div 6 =$		
21.	$27 \div 9 =$		
22.	$96 \div 12 =$		
23.	$21 \div 3 =$		
24.	$84 \div 7 =$		
My score last time:			

How I can improve:

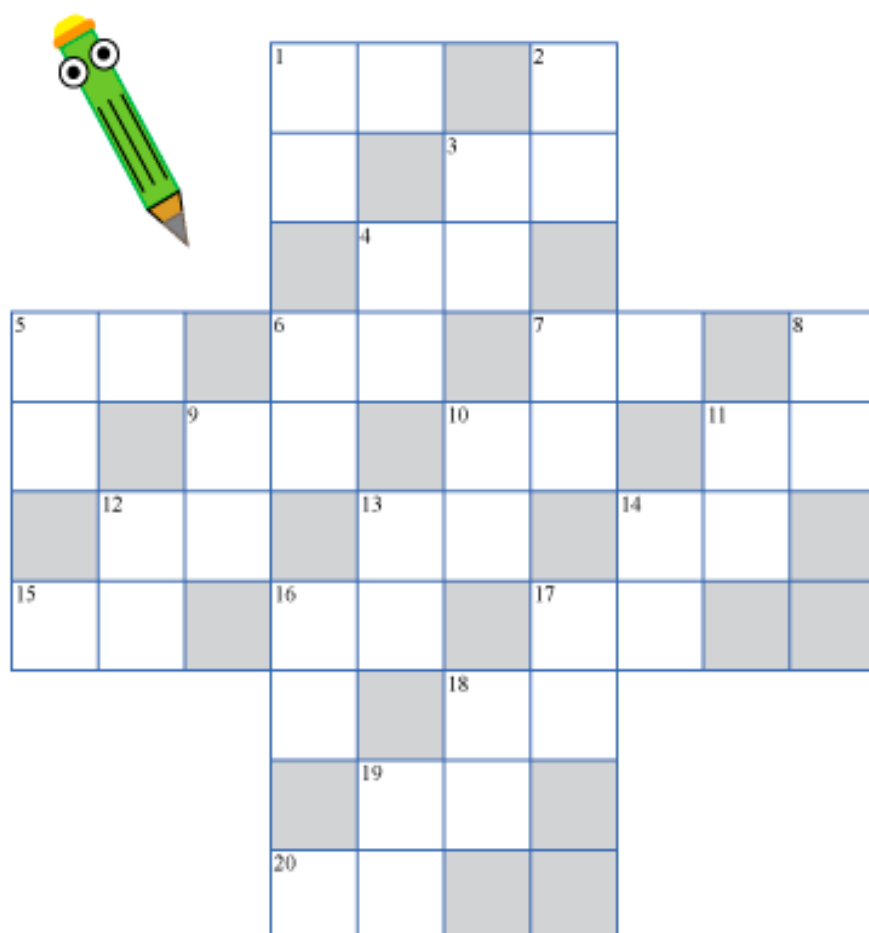
Times table Practise 5

Missing number challenge!

$2 \times \underline{\quad} = 8$	$40 = \underline{\quad} \times 10$	$12 \times \underline{\quad} = 144$	$11 \times 7 = \underline{\quad}$	$\underline{\quad} \times 3 = 21$	$48 = 12 \times \underline{\quad}$
$\underline{\quad} \times 1 = 3$	$\underline{\quad} \times 4 = 24$	$\underline{\quad} \times 5 = 30$	$35 = \underline{\quad} \times 5$	$8 \times \underline{\quad} = 72$	$8 \times \underline{\quad} = 24$
$\underline{\quad} = 5 \times 2$	$3 \times \underline{\quad} = 21$	$4 \times \underline{\quad} = 44$	$\underline{\quad} \times 8 = 40$	$5 \times 4 = \underline{\quad}$	$120 = \underline{\quad} \times 10$
$4 \times \underline{\quad} = 16$	$8 \times 11 = \underline{\quad}$	$48 = 6 \times \underline{\quad}$	$9 \times \underline{\quad} = 36$	$11 \times \underline{\quad} = 121$	$\underline{\quad} \times 4 = 16$
$10 \times \underline{\quad} = 60$	$7 \times \underline{\quad} = 35$	$9 \times \underline{\quad} = 90$	$1 \times \underline{\quad} = 8$	$18 = 3 \times \underline{\quad}$	$9 \times \underline{\quad} = 18$
$\underline{\quad} \times 4 = 8$	$\underline{\quad} \times 9 = 18$	$\underline{\quad} \times 6 = 12$	$12 \times 6 = \underline{\quad}$	$\underline{\quad} \times 6 = 48$	$30 = \underline{\quad} \times 5$
$16 = 8 \times \underline{\quad}$	$8 \times \underline{\quad} = 80$	$7 \times 7 = \underline{\quad}$	$\underline{\quad} \times 9 = 63$	$\underline{\quad} \times 9 = 27$	$9 \times \underline{\quad} = 36$
$5 \times 3 = \underline{\quad}$	$\underline{\quad} \times 2 = 12$	$\underline{\quad} \times 1 = 8$	$\underline{\quad} \times 10 = 30$	$24 = 4 \times \underline{\quad}$	$2 \times \underline{\quad} = 14$
$\underline{\quad} \times 3 = 30$	$20 = \underline{\quad} \times 5$	$\underline{\quad} \times 9 = 81$	$9 \times \underline{\quad} = 54$	$\underline{\quad} \times 7 = 49$	$8 \times 5 = \underline{\quad}$
$\underline{\quad} \times 1 = 12$	$12 \times \underline{\quad} = 72$	$36 = 12 \times \underline{\quad}$	$\underline{\quad} \times 4 = 12$	$12 \times \underline{\quad} = 144$	$3 \times \underline{\quad} = 12$
$3 \times \underline{\quad} = 18$	$\underline{\quad} = 3 \times 3$	$10 \times 12 = \underline{\quad}$	$8 \times \underline{\quad} = 64$	$6 \times \underline{\quad} = 18$	$\underline{\quad} \times 6 = 36$
$\underline{\quad} \times 4 = 44$	$8 \times \underline{\quad} = 32$	$8 \times \underline{\quad} = 56$	$\underline{\quad} = 2 \times 7$	$8 \times \underline{\quad} = 56$	$\underline{\quad} \times 9 = 99$
$7 \times \underline{\quad} = 14$	$\underline{\quad} \times 4 = 16$	$\underline{\quad} \times 10 = 30$	$12 \times \underline{\quad} = 132$	$4 \times 10 = \underline{\quad}$	$28 = 4 \times \underline{\quad}$
$8 \times 3 = \underline{\quad}$	$\underline{\quad} \times 7 = 70$	$5 \times \underline{\quad} = 40$	$25 = \underline{\quad} \times 5$	$\underline{\quad} \times 2 = 16$	$9 \times 3 = \underline{\quad}$
$20 = 4 \times \underline{\quad}$	$5 \times \underline{\quad} = 25$	$\underline{\quad} \times 2 = 4$	$\underline{\quad} \times 8 = 16$	$\underline{\quad} \times 4 = 28$	$5 \times \underline{\quad} = 25$
$11 \times \underline{\quad} = 99$	$\underline{\quad} \times 3 = 33$	$9 \times 5 = \underline{\quad}$	$24 = 8 \times \underline{\quad}$	$9 \times \underline{\quad} = 45$	$7 \times \underline{\quad} = 21$
$\underline{\quad} \times 3 = 12$	$\underline{\quad} \times 4 = 36$	$3 \times \underline{\quad} = 12$	$77 = 11 \times \underline{\quad}$	$\underline{\quad} \times 6 = 72$	$\underline{\quad} \times 4 = 24$
$9 \times \underline{\quad} = 18$	$\underline{\quad} = 7 \times 1$	$8 \times \underline{\quad} = 32$	$\underline{\quad} \times 6 = 18$	$3 \times 3 = \underline{\quad}$	$12 \times \underline{\quad} = 24$
$5 \times 10 = \underline{\quad}$	$\underline{\quad} \times 11 = 66$	$\underline{\quad} \times 9 = 45$	$\underline{\quad} = 11 \times 8$	$8 \times \underline{\quad} = 48$	$\underline{\quad} \times 5 = 45$
$\underline{\quad} \times 2 = 6$	$\underline{\quad} \times 6 = 36$	$48 = \underline{\quad} \times 4$	$12 \times \underline{\quad} = 144$	$5 \times \underline{\quad} = 60$	$7 \times \underline{\quad} = 49$
$\underline{\quad} \times 3 = 21$	$10 \times \underline{\quad} = 50$	$5 \times \underline{\quad} = 10$	$15 = \underline{\quad} \times 3$	$4 \times \underline{\quad} = 12$	$\underline{\quad} \times 8 = 96$
$8 \times \underline{\quad} = 40$	$18 = \underline{\quad} \times 3$	$9 \times 1 = \underline{\quad}$	$2 \times \underline{\quad} = 12$	$7 \times \underline{\quad} = 42$	$3 \times \underline{\quad} = 24$
$11 \times 2 = \underline{\quad}$	$9 \times \underline{\quad} = 27$	$\underline{\quad} \times 7 = 14$	$9 \times \underline{\quad} = 27$	$66 = \underline{\quad} \times 6$	$5 \times \underline{\quad} = 15$
$\underline{\quad} \times 12 = 60$	$10 \times 10 = \underline{\quad}$	$12 \times \underline{\quad} = 84$	$\underline{\quad} \times 2 = 16$	$32 = 8 \times \underline{\quad}$	$\underline{\quad} \times 12 = 144$

Times table Practise 6

Multiplication Tables Crossword



ACROSS

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

DOWN

- | | |
|-----------------|-------------------|
| 1. 8×4 | 10. 7×5 |
| 2. 6×4 | 11. 9×4 |
| 3. 3×6 | 12. 8×3 |
| 4. 9×5 | 13. 6×7 |
| 5. 8×6 | 14. 6×2 |
| 6. 7×3 | 16. 5×3 |
| 7. 4×3 | 17. 5×7 |
| 8. 5×4 | 18. 2×12 |
| 9. 9×9 | 19. 4×4 |

Times table Practise 7

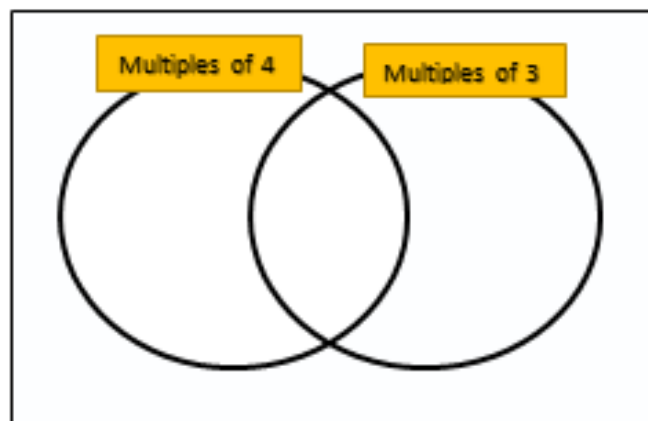
Times Tables Test!

How many can you do in the time given?

Column 1	Column 2	Column 3	Column 4	Column 5
5x6=	4x3=	3x9=	2x9=	8x5=
8x3=	9x9=	5x5=	7x9=	2x2=
8x2=	6x5=	4x5=	5x3=	8x5=
7x3=	10x9=	3x5=	5x10=	7x10=
3x6=	6x9=	7x2=	5x4=	2x4=
6x10=	4x6=	4x9=	3x4=	2x6=
8x9=	3x10=	7x5=	4x9=	9x3=
8x4=	9x5=	12x3=	11x4=	9x10=
5x9=	6x8=	11x9=	10x6=	9x4=
12x4=	11x3=	6x6=	10x5=	10x10=
4x4=	12x9=	2x3=	11x5=	6x3=
8x5=	8x4=	11x10=	7x4=	7x6=
8x6=	3x8=	12x6=	11x6=	10x4=
12x5=	6x4=	9x6=	12x10=	3x7=

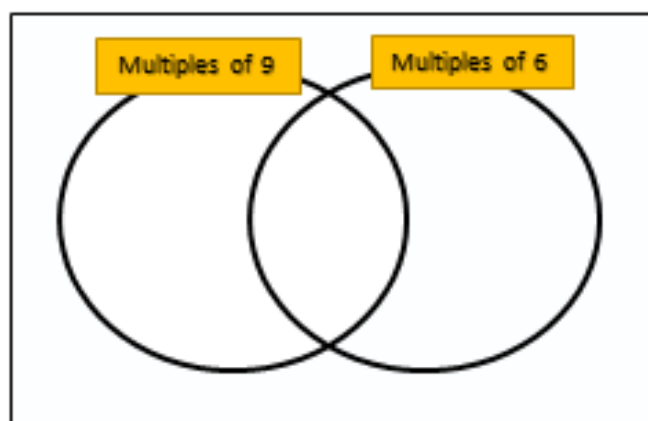
Times table Practise 8

Practice it



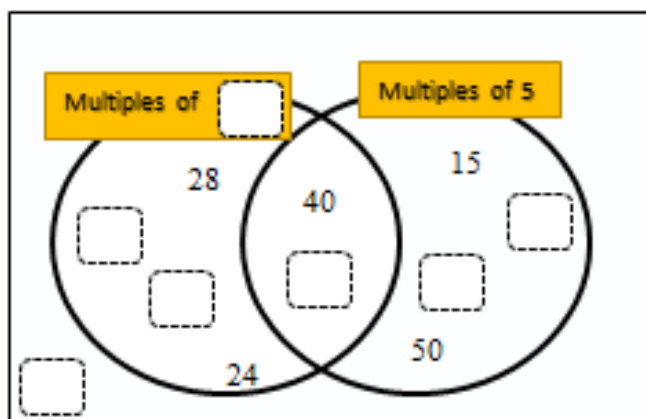
Place the following numbers correctly in the diagram above.

8	2	6	12	9	16
30	7	15	36	20	34

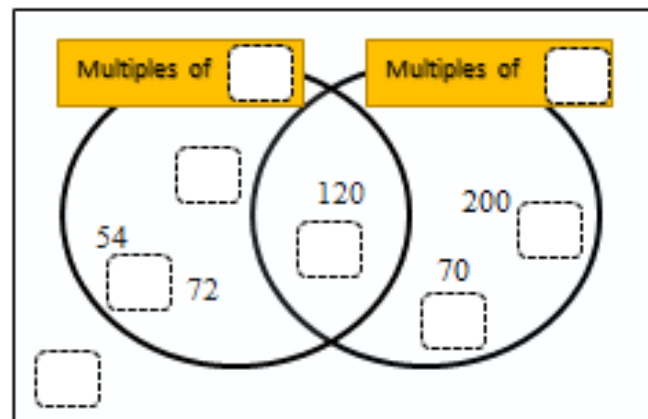


24	10	6	18	39	90
30	63	25	60	45	36

Improve it

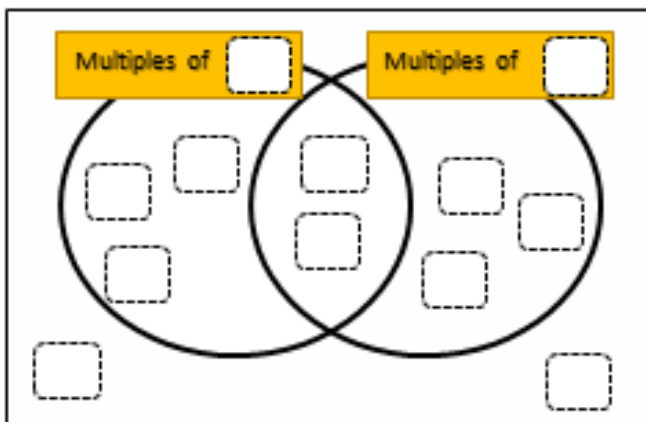


Place numbers of your choice to satisfy the Venn Diagram.



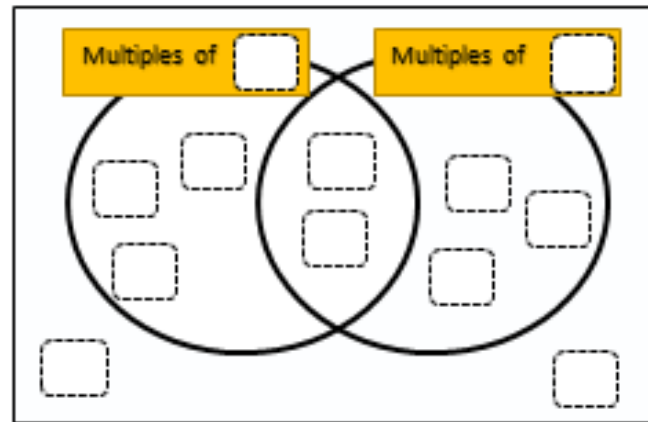
Place numbers of your choice to satisfy the Venn Diagram.

Master it



Place these numbers correctly into the Venn Diagram above.

70	21	15	7	63	36
44	35	3	37	9	56



80	28	12	72	60	16
12	10	24	84	8	56

Times table Practise 9

8 Times Table Code Breaking

Use your knowledge of the 8 times table to help crack the code and find out who stole Bart's skate board!



1. 8×3

2. 8×5

3. 8×9

4. 8×7

5. 8×12

6. 8×8

A	B	C	D	E	F	G	H	I	J
80	48	8	96	42	77	23	87	15	25
K	L	M	N	O	P	Q	R	S	T
24	67	43	103	44	89	66	40	56	96
U	V	W	X	Y	Z				
72	20	74	23	64	18				

Times table Practise 10

A	B	C	D	E	F	G	H	I	J	K	L	M
21	25	7	14	30	16	60	74	12	10	3	1	8
N	O	P	Q	R	S	T	U	V	W	X	Y	Z
63	36	57	9	34	52	24	19	17	49	33	11	87

WHY DID THE BIRD GO TO THE DOCTORS?

4×6

9×4



10×6

5×6

2×12



7×3

3×8

7×7

3×10

6×5

6×4

1×8

10×3

9×7

8×3

Calculation strategies

Addition

Year 5 Add numbers with more than 4 digits

including money, measures and decimals with different numbers of decimal places.

$$\begin{array}{r} \pounds 23.59 \\ + \pounds 7.55 \\ \hline \pounds 31.14 \end{array}$$

The decimal point should be aligned in the same way as the other place value columns, and must be in the same column in the answer.

$$\begin{array}{r} 23481 \\ + 1362 \\ \hline 24843 \end{array}$$

Numbers should exceed 4 digits.

$$\begin{array}{r} 19.01 \\ 3.65 \\ + 0.70 \\ \hline 23.36 \end{array}$$

Pupils should be able to add more than two values, carefully aligning place value columns.

Say 6 tenths add 7 tenths to reinforce place value.

Empty decimal places can be filled with zero to show the place value in each column.

Children should:

- Understand the place value of **tenths and hundredths** and use this to align numbers with different numbers of decimal places.

Representations:

Continue to represent calculations using base 10/dienes and place value counters for those children who need it. See Year 3 representations sheet. Continue to practice exchanging with decimal place value counters.

Subtraction

Year 5 Subtract with at least 4-digit numbers

including money, measures, decimals.

Compact column subtraction (with exchanging).

$$\begin{array}{r} 28928 \\ - 2128 \\ \hline 26800 \end{array}$$

Subtracting with larger integers.

$$\begin{array}{r} 6796.5 \\ - 372.5 \\ \hline 6424.0 \end{array}$$

Subtract with decimal values, including mixtures of integers and decimals, aligning the decimal point.

Children who are still not secure with number facts and place value will need to remain on the partitioned column method until ready for the compact method.

See moving to the compact method video.

Create lots of opportunities for subtracting and finding differences with money and measures.

Add a zero in any empty decimal places to aid understanding of what to subtract in that column.

Representations:

Continue to represent calculations using base 10/dienes and place value counters for those children who need it. See Year 3 representations sheet. Continue to practice exchanging with decimal place value counters.

Multiplication

Year 5 Multiply up to 4-digits by 1 or 2 digits.

Introducing column multiplication

- Introduce by comparing a grid method calculation to a short multiplication method, to see how the steps are related, but notice how there are less steps involved in the column method (see video).
- Children need to be taught to approximate first, e.g. for 72×38 , they will use rounding: 72×38 is approximately $70 \times 40 = 2800$, and use the approximation to check the reasonableness of their answer against.

Short multiplication for multiplying by a single digit

x	300	20	7
4	1200	80	28



$$\begin{array}{r} 327 \\ \times 4 \\ \hline 1308 \end{array}$$

Pupils could be asked to work out a given calculation using the grid, and then compare it to your column method. What are the similarities and differences? Unpick the steps and show how it reduces the steps.

Introduce long multiplication for multiplying by 2 digits

	10	8
10	100	80
3	30	24



$$\begin{array}{r} 18 \\ \times 13 \\ \hline 54 \\ 180 \\ \hline 234 \end{array}$$

18×3 on the 1st row ($8 \times 3 = 24$, carrying the 2 for twenty, then 10×3).
 18×10 on the 2nd row. Put a zero in ones first, then say 8×1 , and 1×1 .

Moving towards more complex numbers:

$$\begin{array}{r} 1234 \\ \times 16 \\ \hline 7404 \\ 12340 \\ \hline 19744 \end{array}$$

(1234 x 6)
(1234 x 10)

$$\begin{array}{r} 3652 \\ \times 8 \\ \hline 29216 \end{array}$$

Approximate, Calculate, Check it

The grid could be used to introduce long multiplication, as the relationship can be seen in answers in each row.

Division

Year 5 Divide up to 3-digit numbers by a single digit

(without remainders initially)

Continue to develop short division:

Short division should only be taught once children have secured the skill of calculating remainder.

$$\begin{array}{r} 18 \\ 4 \overline{) 72} \end{array}$$

STEP 1: Pupils must be secure with the process of short division for dividing 2-digit numbers by a single digit (those that do not result in a final remainder – see steps in Y3), but must understand how to calculate remainders, using this to carry remainders within the calculation process (see example).

$$\begin{array}{r} 218 \\ 4 \overline{) 872} \end{array}$$

STEP 2: Pupils move onto dividing numbers with up to 3-digits by a single digit, however problems and calculations provided should **not result in a final answer with remainder** at this stage. Children who exceed this expectation may progress to Y5 level.

$$\begin{array}{r} 037 \\ 5 \overline{) 185} \end{array}$$

When the answer for the **first column** is zero ($1 \div 5$, as in example), children could initially write a zero above to acknowledge its place, and must always 'carry' the number (1) over to the next digit as a remainder.

Include money and measure contexts when confident.

Real life contexts need to be used routinely to help pupils gain a full understanding, and the ability to recognise the place of division and how to apply it to problems.

Calculation practise 1

Use your Year 5 written method to solve the below calculations.
Look at the operation being used and use the written method help sheet.

Addition

$$45 + 88 =$$

$$456 + 624 =$$

$$666 + 456 =$$

$$1,152 + 4,502 =$$

$$123,560 + 89,456 =$$

Multiplication

$$24 \times 9 =$$

$$45 \times 5 =$$

$$567 \times 8 =$$

$$687 \times 7 =$$

$$1009 \times 4 =$$

Subtraction

$$85 - 45 =$$

$$555 - 102 =$$

$$1456 - 0214 =$$

$$10,023 - 451 =$$

$$88,564 - 66,245 =$$

Division

$$45 \div 5 =$$

$$68 \div 5 =$$

$$321 \div 10 =$$

$$2358 \div 100 =$$

Calculation practise 2

Use your Year 5 written method to solve the below calculations.
Look at the operation being used and use the written method help sheet.

Addition

$$896 + 1598 =$$

$$15,456 + 30,033 =$$

$$88,740 + 5,680$$

$$123.5 + 456.2 =$$

$$456.02 + 10.23 =$$

Multiplication

$$57 \times 3 =$$

$$68 \times 6 =$$

$$128 \times 7 =$$

$$153 \times 6 =$$

$$465 \times 47 =$$

Subtraction

$$85 - 9 =$$

$$880 - 564 =$$

$$4068 - 3123 =$$

$$897.56 - 220.45 =$$

$$30,001 - 29,000 =$$

Division

$$150 \div 2 =$$

$$99 \div 3 =$$

$$1444 \div 12 =$$

$$6851 \div 4 =$$

Place value 1

Tommy says he can order the following numbers by only looking at the first three digits.

12,516

12,832

12,679


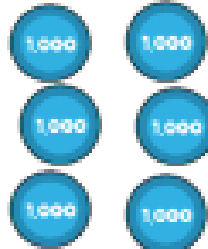
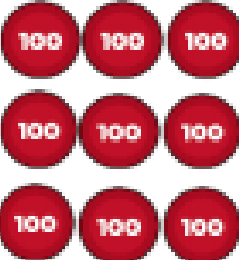


12,538

12,794

Is he correct?

Explain your answer.

What number is represented below?

10,000s	1,000s	100s	10s	1s
				

Georgia says that the number is multiple of 5

Is Georgia correct? Explain your answer.

Place value 2

Complete the missing numbers.

$$47,603 = 40,000 + \text{-----} + 600 + 3$$

$$\text{-----} = 50,000 + 300 + 70 + 4$$

$$80,000 + 7,000 + \text{-----} = 88,300$$

What is the missing number?

305,700		
300,000	?	700

Complete the missing numbers.

19	10,019		30,019		
----	--------	--	--------	--	--

Arrange the digit cards to make an **odd** number between 70,000 and 100,000

1

4

6

8

9

Round your number to the nearest 1,000

Round your number to the nearest 10,000

Problem solving 1

Here are the answers to some problems:

5,700

405

397

6,203

Can you write at least two questions for each answer involving dividing by 10, 100 or 1,000?

I am thinking of two 2-digit numbers.

Both of the numbers have a digit total of six.

Their common factors are:

1, 2, 3, 4, 6, and 12

What are the numbers?

Dora says all prime numbers have to be odd.



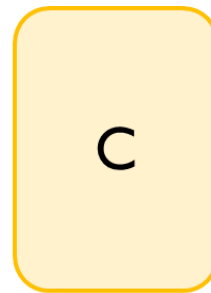
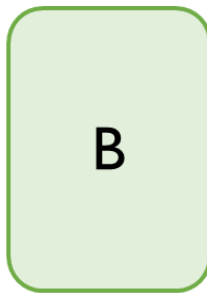
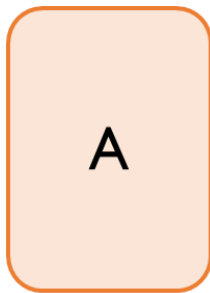
Her friend Amir says that means all odd numbers are prime, so 9, 27 and 45 are prime numbers.



Explain Amir's and Dora's mistakes and correct them.

Problem solving 2

Here are 3 cards



On each card there is a cube number. Use these calculations to find each number.

$$A \times A = B$$

$$B + B - 3 = C$$

$$\text{Digit total of } C = A$$

Jack is thinking of a 3-digit number.

When he multiplies his number by 100, the ten thousands and hundreds digit are the same.

The sum of the digits is 10

What number could Jack be thinking of?

Reasoning 1

This table shows the ticket prices for a theme park.

	Monday - Friday	Saturday and Sunday
Adult	£18.50	£21
Child	£12.50	£14

A family of 2 adults and 2 children are planning to go to the theme park.

How much more would it cost to go on Saturday rather than Thursday?

A toy shop has 2,328 games in stock.

They receive 981 more games.

They sell 1,435 games.

How many games does the toy shop have now?

Mrs Hyde bakes 180 cookies.

She sells them in boxes of 10

Each box costs £4

How much money does she make in total?

£

Reasoning 2

Complete the missing digits.

$$\begin{array}{r} 28\boxed{}65 \\ - 159\boxed{}2 \\ \hline 1\boxed{}403 \\ \hline \end{array}$$

Class 1 and Class 2 have a total of 675 house points.

Class 1 have double the number of house points that Class 2 have.

How many house points do Class 2 have?

Write each number in it's correct place on the diagram.

4 8 16 ~~32~~ 40 48

One has been done for you.

