

Maths - Year 5

Calculating 4: Developing fluency with multiplying and dividing

Key Vocabulary

Product	The result of multiplying two or more numbers together.
Divisor	The number you are dividing by.
Quotient	The result of dividing one number by another.
Commutative property	When adding or multiplying 2 numbers, the answer will be the same no matter which order the numbers are in .
Multiple	The product of two whole numbers.
Factor	A number that divides into another number exactly.

Mathematical Skills

- Explain that the commutative property of multiplying reduces the number of facts they have to learn.
- Recognise patterns in multiplication tables and use these to make general rules for tables they are learning.
- Develop fluency with a growing number of multiplying facts.
- Have strategies to work out multiplication facts they cannot yet recall.
- Recognise when to use their knowledge of times tables facts, factors and multiples to solve problems.
- Use knowledge of multiples and related dividing facts to identify common factors.
- Use knowledge of factors to work out missing numbers in multiplying calculations.

Mathematical Methods

- Revising multiplication facts.

x	0	1	2	3	4	5	6	7	8	9	10	11	12
0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	1	2	3	4	5	6	7	8	9	10	11	12
2	0	2	4	6	8	10	12	14	16	18	20	22	24
3	0	3	6	9	12	15	18	21	24	27	30	33	36
4	0	4	8	12	16	20	24	28	32	36	40	44	48
5	0	5	10	15	20	25	30	35	40	45	50	55	60
6	0	6	12	18	24	30	36	42	48	54	60	66	72
7	0	7	14	21	28	35	42	49	56	63	70	77	84
8	0	8	16	24	32	40	48	56	64	72	80	88	96
9	0	9	18	27	36	45	54	63	72	81	90	99	108
10	0	10	20	30	40	50	60	70	80	90	100	110	120
11	0	11	22	33	44	55	66	77	88	99	110	121	132
12	0	12	24	36	48	60	72	84	96	108	120	132	144

- Using multiplying facts e.g. exploring factors of 12.



- Solving problems with multiplying and dividing facts e.g. exploring factor relationships.

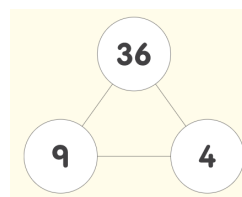
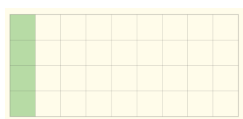
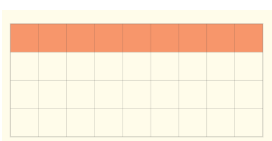
- Using factors to solve empty box balancing problems involving multiplying e.g. $\square \times \square \times 5 = 42 \times 5$.

- Revising the short written method of multiplying and dividing.

	2	2	3
x			4
	8	9	2
		1	

	1	2	3	rl
4	4	9	3	

- Revising finding fractions of amounts using multiplying and dividing facts e.g. Finding $\frac{1}{4}$ and $\frac{1}{9}$ of 36.



- | | | | | |
|---|---|---|---|----|
| 1 | 2 | 3 | 4 | 5 |
| 6 | 7 | 8 | 9 | 10 |

- Arrange the cards to make $\text{HTO} \times \text{O}$ calculations that give the greatest and smallest products.

A horizontal row of four light green rectangular boxes. Each box contains a black number. From left to right, the numbers are 2, 3, 4, and 5.

- | | | | | | |
|---|---|--|---|---|---|
| | | | | | |
| | | | 4 | | 2 |
| x | | | | | |
| | 1 | | 6 | 0 | |
| | | | | | |

		4	1	<input type="text"/>
6)	2	<input type="text"/>	9	<input type="text"/>

- Which multiplying facts would you use to solve $\frac{1}{5}$ of 42?
- Calculate 0.6×3 .
- Calculate $1.5 \div 6$.