



Year 6 – Maths – Four operations

Vocabulary

Add
Total
Make
Plus
Sum
More
Altogether
Difference
Leave
Subtract
Difference between
Less
Minus
Take away
Mentally, Orally
Column Addition
Column Subtraction
Estimate
Inverse operation
Solve problems
Number facts
Place Value
Complex

Add and subtract whole numbers



Column Method

	4	5	8	6	4
+	2	3	4	9	7
	6	9	3	6	1
		1	1	1	

Starting with the ones, add each column in turn.

Regroup tens, hundreds, thousands, ten thousands as required.

	3	5	6	13	1
-		3	4	7	6
	3	2	2	6	6

Starting with the ones, subtract each column in turn.

Exchange tens, hundreds, thousands and/or ten thousands as required.

Multiplication

1	3	2	
	1	5	4
×		2	6
	9	2	4
3	0	8	0
4	0	0	4
1	1		

Start with the ones.

$$154 \times 6 = 924$$

$$154 \times 20 = 3080$$

$$3080 + 924 = 4004$$



Order of operations



B	Brackets	$10 \times (4 + 2) = 10 \times 6 = 60$
O	Order	$5 + 2^2 = 5 + 4 = 9$
D	Division	$10 + 6 \div 2 = 10 + 3 = 13$
M	Multiplication	$10 - 4 \times 2 = 10 - 8 = 2$
A	Addition	$10 \times 4 + 7 = 40 + 7 = 47$
S	Subtraction	$10 \div 2 - 3 = 5 - 3 = 2$



Year 6 – Maths – Addition and subtraction

Short division

Short Division



Start from the left.

		4	4	0	5	$5 \div 12 = 0 \text{ r}5$
12	5	⁵ 2	⁴ 8	6	⁶ 0	$52 \div 12 = 4 \text{ r}4$
						$48 \div 12 = 4$
						$6 \div 12 = 0 \text{ r}6$

Common factors and common multiples

Factors of 48

1	2	3	4	6	8	12	16	24	48
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Factors of 30

1	2	3	5	6	10	15	30
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Common factors: 1, 2, 3, 6

Multiples of 3

3	...	18	21	24	...	39	42
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Multiples of 7

7	14	21	28	35	42
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Common multiples: 21, 42...

Long division



		1	2	0	r	3
14	1	6	8	3		
	1	4	0	0		
		2	8	3		
		2	8	0		
				3		

Prime and square numbers

A prime number has only 1 and itself as factors: 2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37, 41, 43

A composite number has factors other than 1 and itself.



Square numbers result from a number being multiplied by itself (e.g. $5 \times 5 = 25$):

1, 4, 9, 16, 25, 36, 49, 64, 81, 100

Cube numbers result from a number being multiplied by itself twice ($2 \times 2 \times 2 = 8$):

1, 8, 27, 64, 125

Key questions

Use BODMAS to solve the following equation...

Find a common factor of ____ between 30 and 50.

Tell me a strategy to identify a prime numbers...

Links to other learning

Year 7 - Use the concepts and vocabulary of prime numbers, factors, multiples, common factors, common multiples, highest common factor, lowest common multiple and prime factorisation; Use the 4 operations, including formal written methods, applied to integers, decimals, proper and improper fractions, and mixed numbers, all both positive and negative;; Use conventional notation for the priority of operations, including brackets, powers, roots and reciprocals.

