



Year 6	Year 6		Black 2		Unit: Four Operations	
Key Vocabulary:						
addition	total	column subtraction		more	altogether	difference
subtract	less	column	addition	sum	estimate	place value
number facts invers		inverse d	operation	prime	squared	cubed
long division	sho	rt division	long multiplication		short multiplication	

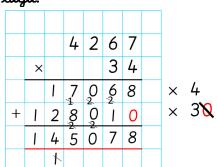
What will I know by the end of this unit?

Add Whole Numbers:

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

Starting with the ones, add column in turn. Regroup tens, hundreds, thousands, ten thousand and so on as required.

Multiply up to 4-digit by 2-digit:



Prime Numbers:

A prime number has only 2 factors. I and itself.

2, 3, 4, 5, 7, II, I3, I7, I9, 23, 29, 31, 33, 37, 41, 43

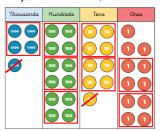
Subtract Whole Numbers:

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

Starting wirh the ones, subract each column in turn. Exchange tens, hundreds, thousands and/or ten thousands and so on as required.

Short division:

$$5.291 \div 4 = 1.322 x3$$



	1	3		2	<i>x</i> 3
4	5	12	9	П	

Squared and Cubed:

Square numbers result from a number being multiplied by itself:

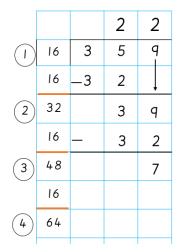
$$5^2$$
 5 X 5 = 25

Cube numbers result from a number by multiplied by itself twice:

$$2^{3}$$
2 X 2 X 2 = 8
(2 X 2) X 2 = 8

Long division:

$$359 \div 16 = 22 x7$$



Reason from Known Facts:

So, $1.6 \times 9 = 14.4$

Common Factors:

Factors of 48:

1 2 3 4 6 8 12 16 24
48

Factors of 30:

1 2 3 5 6 10 15 30

Common factors: 1, 2, 3, 6

Common Multiplies:

Multiplies of 3: 3 ... 18 21 24 ... 39 42

Multiplies of 7:
7 | 4 | 2| | 28 | 35 | 42

Common multiplies: 21, 42 ...

Mental Calculations and Estimation:

Subdivide line to estimate: 17



Order of Operations:

В	Brackets	10 X (4 + 2) = 10 X 6 = 60
0	Order	$5 + 2^2 = 5 + 4 = 9$
D	Division	$10 + 6 \div 2 = 10 + 3 = 13$
М	Multiplication	10 - 4 X 2 = 10 - 8 = 2
Α	Addition	$10 \times 4 + 7 = 40 + 7 = 47$
S	Subtraction	$10 \div 2 - 3 = 5 - 3 = 2$