

Key vocabulary

Multiples, primes, composite numbers, factors, common factors, prime factors, short multiplication, long multiplication, short division, dividend, divisor, quotient, square numbers, cube numbers, powers, indices, integer

Short multiplication

When multiplying by a 1-digit number, firstly make sure to align the place values correctly. Multiply the 1-digit number by each of the digits working from right (smallest place value) to left (largest place value).

	2	7	4	1
×				6
1	6	4	4	6
	4	2		

Mental division

A number is divided by ...	If ...	Example
2	it ends in 0, 2, 4, 6, 8	268
3	the digit sum is a multiple of 3	462 (4 + 6 + 2 = 12)
4	last 2 digits are a multiple of 4	12,624 (24 is in the 4 times table)
5	it ends in 0 or 5	375
6	it's divisible by both 2 and 3	522 (even number and digit sum is a multiple of 3)
9	the digit sum is a multiple of 9	1,413
10	it ends in 0	5,370

Short division

Place the dividend (number being divided) inside the frame;

place the divisor (number the dividend is being divided by) to the left of the frame;

place the quotient (answer) above.

Unlike addition, subtraction and multiplication methods, here we work left to right (from the biggest place value digit to the smallest) to solve the division problem.

432 ÷ 5 becomes

	0	8	6	r2
5	4	3	2	

Long multiplication

When multiplying by a 2-digit number, make sure to align the place values correctly.

Firstly, multiply the ones digit in the second number by each of the digits in the first number working from right (smallest place value) to left (largest place value).

Secondly, multiply the tens digit in the second number by each of the digits in the first number working from right to left – but don't forget to use a 0 as a place value holder as you are multiplying everything by 10.

Lastly, add the two numbers together.

		1	2	4
	×		2	6
		7	4	4
		1	2	
+	2	4	8	0
	3	2	2	4
	1	1		