

Short Multiplication

	2	4	x	6	=
	2	4			
x		6			
	1	² 4	4		

1. Multiply the ones
2. Regroup the tens (if needed)
3. Multiply the tens
4. Add the re-grouped tens

Long Multiplication

24 x 16 =

Same as short multiplication, and then:

5. Place a zero in the ones column
6. Multiply the tens by the ones
7. Regroup the tens (if needed)
8. Multiply the tens by the tens
9. Add the re-grouped tens
10. Draw an equals
11. Add each column, starting with the ones to the tens to the hundreds

		2	4
x	1	6	
	1	² 4	4
+	2	4	0
	3	8	4

Zero as the place holder for the ones column

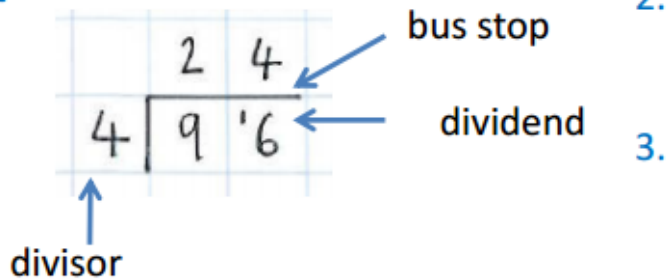
$$\begin{array}{r} 502 \\ \times 336 \\ \hline 3012 \\ 15060 \\ + 150600 \\ \hline 168672 \end{array}$$

Zero as the place holder for the ones column

Two zeroes as the place holder for the ones and ten column

Short Division

$$96 \div 4 = 24$$



As above, when there is a remainder once the ones within the dividend has been divided by the divisor:

4. Insert a decimal point after the ones with the bus stop and above the bus stop (within the answer)
5. Write the remainder, small, after the decimal point and insert a zero as a place holder i.e. 40
6. Divide the tenths by the divisor and record the answer after the decimal above the bus stop.

If there is a remainder write in small with the bus stop and write a zero as a place holder.

Long Division (by chunking)

432 ÷ 15

28 $\frac{4}{5}$ or 28.8

15 | 432

300 (20 x 15)

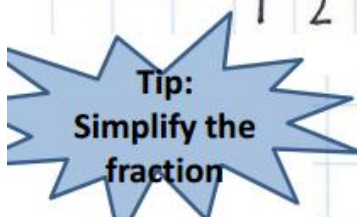
- 12

75 (5 x 15)

- 45 (3 x 15)

12

1. Use known multiplication facts to chunk i.e. $15 \times 2 = 30$ so $15 \times 20 = 300$.
2. Record the answer below the number inside the bus stop and write the multiplication in brackets on the right hand side)
3. Subtract the two numbers and write the answer below.
4. Repeat the above steps until you can no longer divide the dividend by the divisor.
5. Total the numbers in the brackets which were multiplied by the divisor and write the answer above the bus stop.



$$\frac{12}{15} = \frac{4}{5} = 0.8$$

Long Division (formal written method)

			2	8	r	1	2
1	5	4	3	2			
		-	3	0	↓		
			1	3	2		
		-	1	2	0		
				1	2		

$$\frac{12}{15} = \frac{4}{5} = 0.8$$



How to Divide!



Does

÷ (divide)

McDonald's

x (multiply)

Serve

- (subtract)

Burgers?

↓ (bring down)

Repeat

1. Divide the divisor into the first digit of the dividend. If it can't divide then look at the next digit as a two digit number and divide.
2. Record the answer at the top of the bus stop i.e. 15 goes into 43 two times, $15 \times 2 = 30$
3. Take the answer away from the two digit number at the start of the bus stop i.e. $43 - 30 = 13$
4. Carry down the ones from under the bus stop i.e. 132
5. Repeat the above steps until the divisor can no longer go into the dividend