

Essential knowledge

Know the difference between factors and multiples. Know the place value of digits. Know the conversions between metric units. Know how to calculate the mean. Know how to calculate the area of common 2-D shapes.

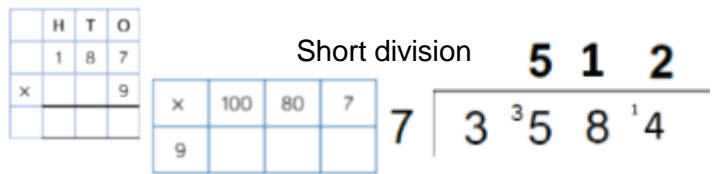
Key Vocabulary

Array: an arrangement of items to represent concepts in rows or columns
 Multiples: found by multiplying any number by positive integers
 Factor: integers that multiply together to get another number
 Mili: prefix meaning one thousandth
 Centi: prefix meaning one hundredth.
 Kilo: prefix meaning multiply by 1000

Prior learning links

Place value. Fact families. Part, model, whole.
 Multiplication and addition are associative
 Division is not associative
 Factors, Multiples

Multiplication and division methods



Long multiplication or grid method

Factors and multiples

Arrays can help represent factors

Factors of 10

•••••
 •••••
 2x5 or 5x2

••••••••••
 1x10 or 10x1

So factors are 1,10,2,5

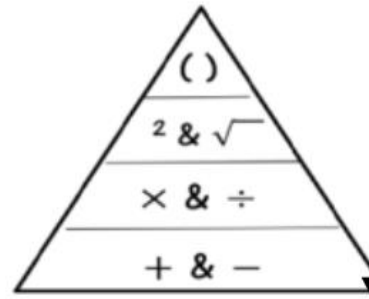
Multiples are in the multiplication table

e.g. multiples of 6

would be

6,12,18,24

Order of operations



Brackets

Indices

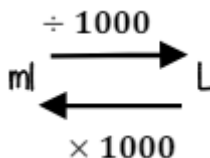
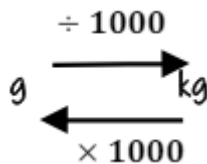
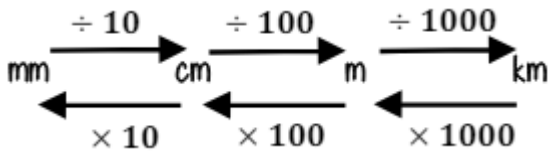
Multiplication and division

Addition and subtraction

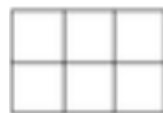
If you have multiple operations from the same tier work from left to right

e.g. $10 - 3 + 5 \rightarrow 10 - 3 \rightarrow 7 + 5 \rightarrow 12$

Metric conversions



Area

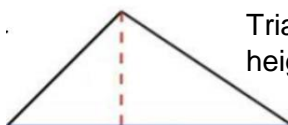


Rectangle – Base x perpendicular height



Parallelogram / rhombus

Base x perpendicular height



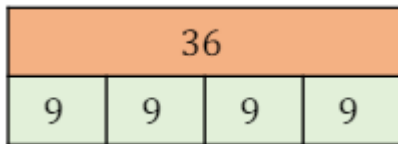
Triangle : $\frac{1}{2}$ (Base and perpendicular height)

Prior learning links

Write the first 5 multiples of the following:

- a) 6
- b) 4
- c) 5

Write all the fact families for the following bar model



Key Vocabulary

Write the definition of the following keywords

- Array:
- Multiples:
- Factor:
- Mili:
- Kilo:

Multiplication and division

Calculate the following using your preferred method:

(a) 142×13 (b) 127×15 (c) 133×12 (d) 186×11

(a) $2735 \div 5$ (b) $3312 \div 4$ (c) $2664 \div 3$ (d) $6540 \div 5$

The product of Jack's age and Florence's age is 266. Jack is 14 years old. How old is Florence?

Factors and multiples

Write all the factors of

- a) 24
- b) 36
- c) 64

What is the highest common factor of 36 and 72?

Write the first 5 multiples of

- a) 12
- b) 110
- c) 65

What is the Lowest common multiple of 6 & 7

Order of operations

(a) $5 \times 3 + 2 \times 6$ (b) $9 \div 3 + 15 \times 2$

(c) $10 \div 2 - 2 \times 1$ (d) $5 \times (2 + 1) + 4$

(e) $8 + (5 - 1) \times 3$ (f) $50 - (1 + 4) \times 4$

(g) $19 \times 2 + 5^2$

Metric conversions

Convert the following lengths into centimetres (cm)

- (a) 4 m
- (b) 9 m
- (c) 12 m

Convert the following lengths into metres (m)

- (a) 300 cm
- (b) 700 cm
- (c) 900 cm

Convert the following lengths into millimetres (mm)

- (a) 2 cm
- (b) 6 cm
- (c) 4.5 cm

Convert the following lengths into kilometres (km)

- (a) 6000 m
- (b) 2000 m
- (c) 5500 m

Area of shapes

Find the area of the following shapes:

