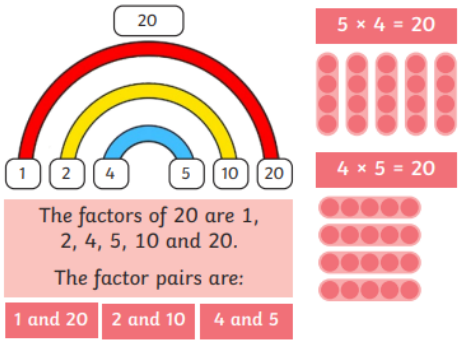
Knowledge Organiser

Year Group	Subject	Topic
4	Maths	**Multiplication and division** **Length and perimeter**

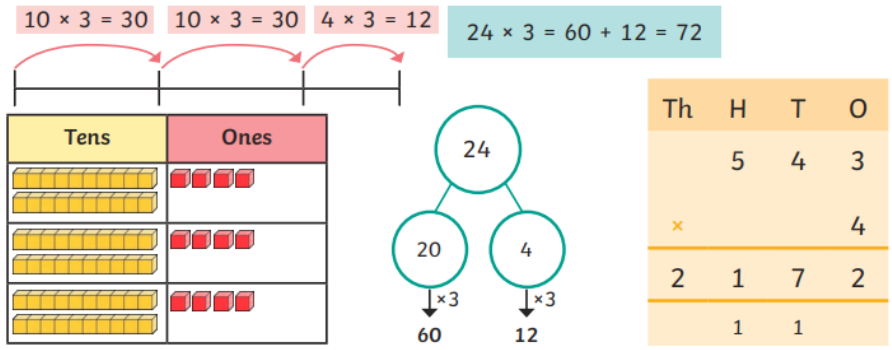
The Big Picture

Children will continue to work on **multiplication and division and Length and Perimeter** in Spring 1.
In year 3, children explored the link between counting in 3s and the 3 times-table to understand multiples of 3 in a range of contexts. This half term children will focus on using factor pairs and using multiplication and division facts for 10 and 10. Children will learn informal methods and acquire skills to multiply and divide 2- and 3-digits numbers.
In year 3, children measured lengths using metres (m) and centimetres (cm). and were introduced to kilometres and km. Now, they will learn to partition measurements into the number of kilometres and metres and make links with addition. Bar models and part-whole models will be used to explore this relationship and to support children with their understanding.

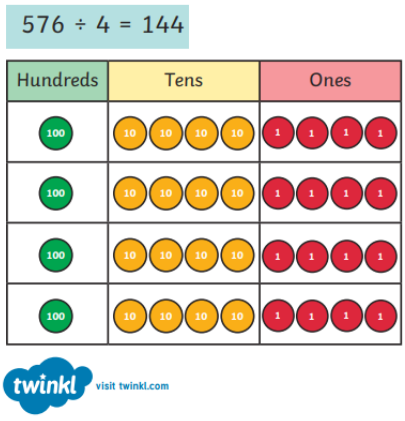
Factor pairs and Commutativity

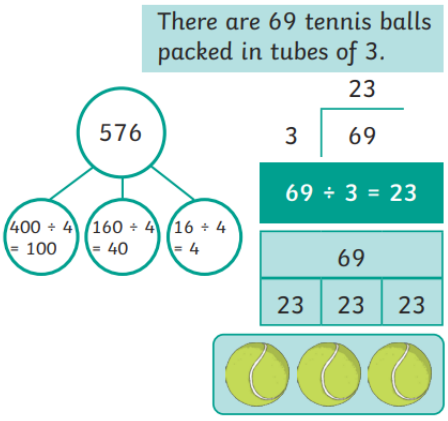


Multiply Using Informal and Formal Methods

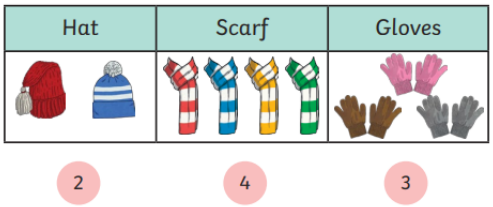


Short Division with Exact Answers





Correspondence Problems



Number of different combinations is:
2 × 4 × 3 = 24

Area, Length and Perimeter — Knowledge Organiser

Keywords

- area
- perimeter
- centimetres
- metres
- squares
- distance
- millimetres
- kilometres
- length
- width
- rectilinear
- right angle

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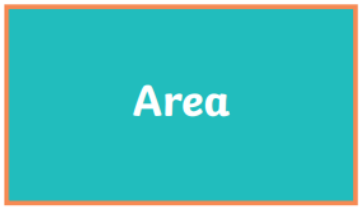
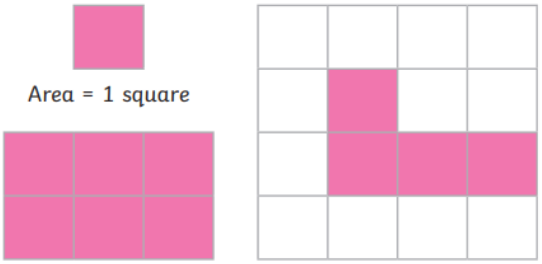
Area

Area is the amount of space inside a 2D shape.



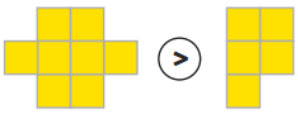
Measuring Area

We can count **squares** to find the **area** of a **rectilinear** shape.



Comparing Area

These rectilinear shapes all have an area of 6 squares.

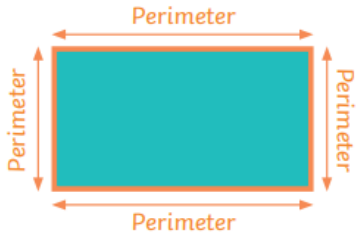


Rectilinear Figures

A **rectilinear** figure is a 2D shape whose sides all meet at **right angles** (90°).

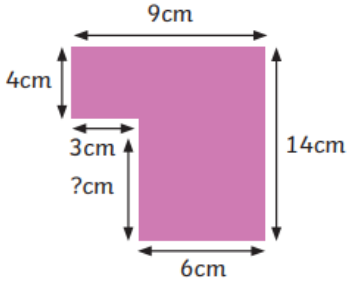
Perimeter

Perimeter is the total **distance** around the outside of a 2D shape.



Perimeter of Rectilinear Shapes

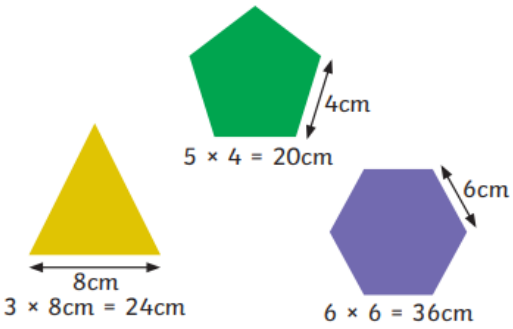
The missing side is 10cm because 10 + 4 = 14.



Perimeter = 9 + 14 + 6 + 10 + 3 + 4 = 46cm.

Perimeter of Polygons

perimeter of regular polygons = number of sides × length of one side



Length

Measure in kilometres and metres.

- km
- m
- cm
- mm

1 **kilometre** = 1000 **metres**

1 **metre** = 100 **centimetres**

1 **centimetre** = 10 **millimetres**