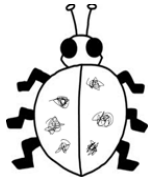
Progression in Written Division

Stage 1

Children are encouraged to develop a mental image of the number system in their heads to use for calculation. They should experience practical calculation opportunities involving **equal** groups and **equal** sharing.

They may develop ways of recording calculations using pictures.

A child's jotting showing halving six spots between two sides of a ladybird.



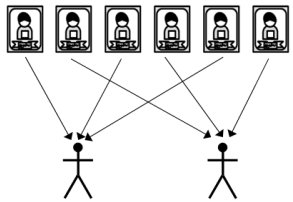
A child's jotting showing how they shared the apples at snack time between two groups.

Stage 2

Children explore practical contexts where they share equally and group equally. 6 ÷ 2 = ?

Equal sharing (6 shared equally between 2)

6 football stickers are shared equally between 2 people, how many do they each get? Children may solve this by using a 'one for you, one for me' strategy until all of the stickers have been given out.



Equal grouping (How many groups of 2 are there in 6?)

There are 6 football stickers, how many people can have 2 stickers each?

Stage 3

Children continue to use practical equipment to represent division calculations as grouping (repeated subtraction) and use jottings to support their calculation.

12 ÷ 3 = ? Children begin to read this calculation as, 'How many groups of 3 are there in 12?'

At this stage, children will also be introduced to division calculations that result in remainders.

13 ÷ 4 = 3 remainder 1

Stage 4

43 ÷ 8

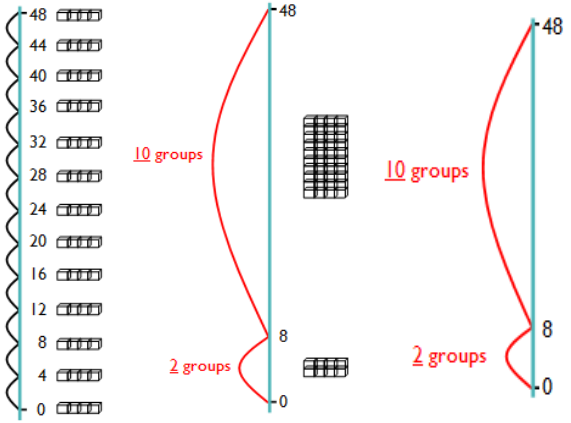
43 ÷ 8 = 5 remainder 3

At this stage, children also learn if the remainder should be rounded up or down e.g. 62 ÷ 8 = 7 remainder 6

I have 62p. Sweets are 8p each. How many can I buy?
Answer: 7 (the remaining 6p is not enough for another sweet)
Apples are packed into boxes of 8. There are 62 apples. How many boxes do I need?
Answer: 8 (the remaining 6 apples still need to be placed into a box)

Stage 5

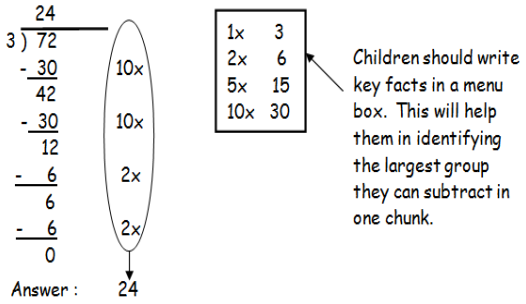
The previous method of repeated subtraction on a number line is continued, but using a vertical number line alongside practical equipment.
The repeated subtraction is made more efficient by subtracting 'chunks' of the divisor.



Stage 6

This is the final stage, in which children use the 'chunking' method.

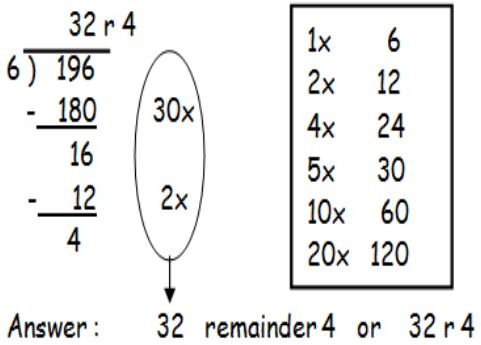
72 ÷ 3



Progression in Written Division

Stage 6 continued

196 ÷ 6

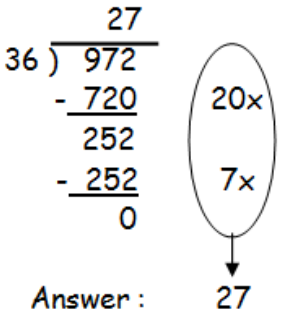


1x	6
2x	12
4x	24
5x	30
10x	60
20x	120

The key facts in the menu box should be extended to include 4x and 20x.

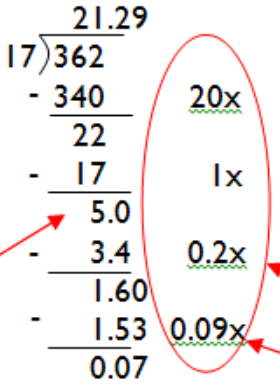
Stage 6 continued

972 ÷ 36



Stage 6 continued

362 ÷ 17



To enable children to continue the calculation, they need to understand that 5 is the same as 5.0

When recalling and deriving multiplication and division facts, children should also identify decimal equivalents of times tables,
e.g. if 2 x 17 = 34, I know that 0.2 x 17 = 3.4
if 9 x 17 = 153, 0.9 x 17 = 15.3
so 0.09 x 17 = 1.53

Children should not be made to go onto the next stage if:

1) **they are not ready.**
2) **they are not confident.**

Children should be encouraged to consider if a mental calculation would be appropriate before using written methods.