

**Calculation Policy:**

**Division**

**Year 5 and 6**

**PROGRESSION THROUGH CALCULATIONS FOR DIVISION**

**MENTAL CALCULATIONS**

These are a selection of mental calculation strategies:

**Doubling and halving**

Knowing that halving is dividing by 2

**Deriving and recalling division facts**

***Tables should be taught everyday from Y2 onwards, either as part of the mental oral starter or other times as appropriate within the day.***

Year 2 10 times table

5 times table

2 times table

Year 3 4 times table

8 times table

3 times table

6 times table

9 times table

Year 4 11times table

12 times table

Derive and recall all multiplication facts up to 12 x 12

Year 5 & 6 Derive and recall quickly division facts for all tables up to 10 x 10

Work out products such as: 70 X 5, 70 X 50 and 700 X 50 using the related fact 7 X 5 and their knowledge of place value.

**Using and applying division facts**

Children should be able to utilise their times table knowledge to derive other facts.

e.g. If I know 21 ÷ 3 = 7, what else do I know?

210 ÷ 70 = 3, 210 ÷ 7 = 30, 210 ÷ 30 = 7, 21 ÷ 30 = 0.7 etc

**Dividing by 10 or 100**

Knowing that the effect of dividing by 10 is a shift in the digits one place to the right.

Knowing that the effect of dividing by 100 is a shift in the digits two places to the right.

**Use related facts**

Given that 1.4 x 1.1 = 1.54

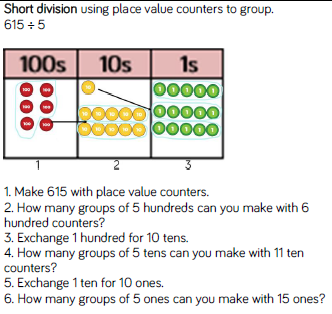
What is 1.54 ÷ 1.4, or 1.54 ÷ 1.1?

MANY MENTAL CALCULATION STRATEGIES WILL CONTINUE TO BE USED. THEY ARE NOT REPLACED BY WRITTEN METHODS*.*

**Division – Year 5/6**

**Short division**

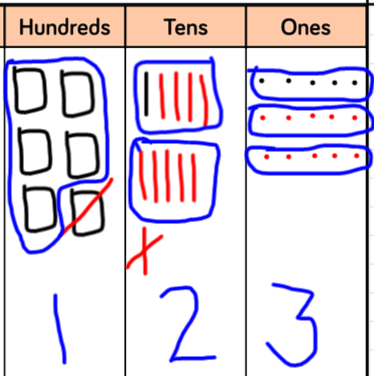
**Concrete:**



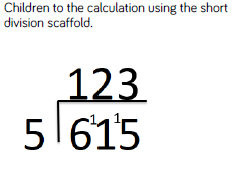
Children need to learn the process but also be able to articulate what they are doing to the digits within the numbers and why.

**Pictorial:**

Represent the digits using pictures.



**Abstract:**



As children become more proficient at dividing larger numbers, encourage children to partition in order to use mental calculations. (600 + 15 ÷ 5 = 123)

**Division – Year 6**

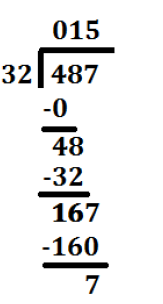
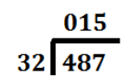
**Long division**

There are not concrete or pictorial representations for long division.

**Abstract:**

**Option 1: Option 2:**

R 7



- 3 2 0 (32 x 10 = 320)

1 6 7 +

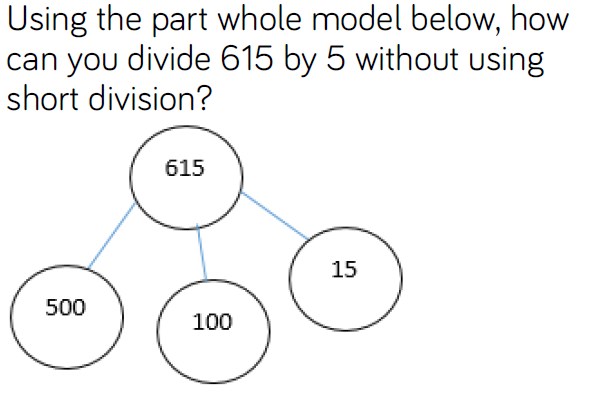
- 1 6 0 (32 x 5 = 160)

7

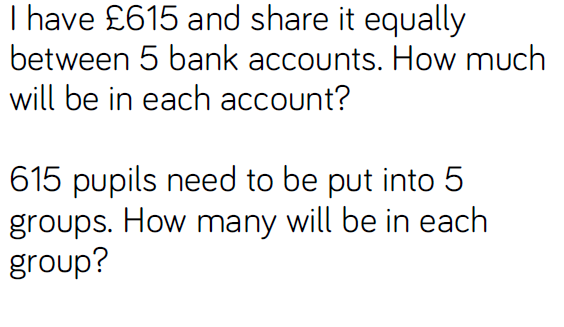
R 7

**Different ways of asking/representing 615 ÷ 5 =**

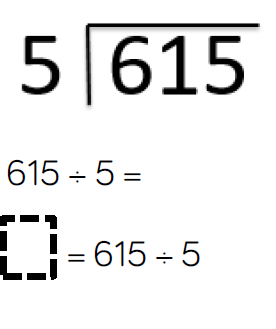
**Part/Whole model:**

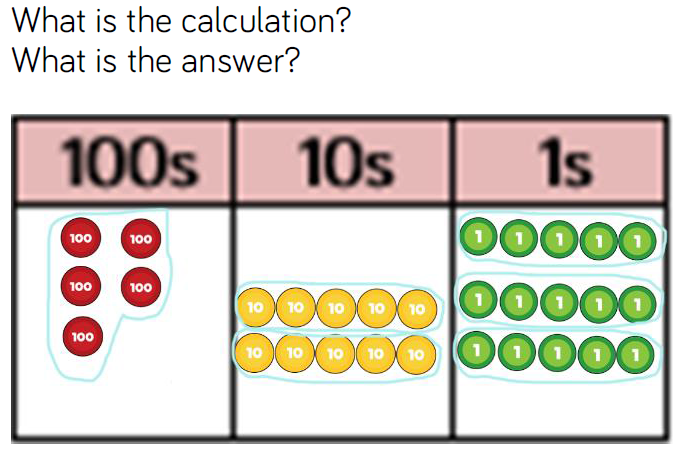


**Word problems:**



**Procedural variation:**



**Conceptual variation**