Division

Short division

This method is best used when dividing by a 1-digit number.

This step requires the children to carry remainders within the calculation to make it more efficient. It should be used to divide TU, HTU, ThHTU.

$$\begin{array}{r} 12 \\ 8\overline{)\,9^{1}6} \end{array}$$

$$\begin{array}{r} 035 \\ 5\overline{)\,1^{1}7^{2}5} \end{array}$$

Remainders

Children should be taught how to express remainders as whole number remainders, fractions and decimals. Decimal places should also be added to show remainders as decimals.

Where applicable, fractions can be simplified but the simplification must be correct. If the fraction simplification is incorrect then the child will not receive the mark. In the KS2 SATs, children do not simplify their fraction answers unless it is specified.

496 ÷ 11 becomes

$$\begin{array}{r} 45\ \text{r}1 \\ 11\overline{)\,496} \\ \quad 5 \end{array}$$

Answer: $45\frac{1}{11}$

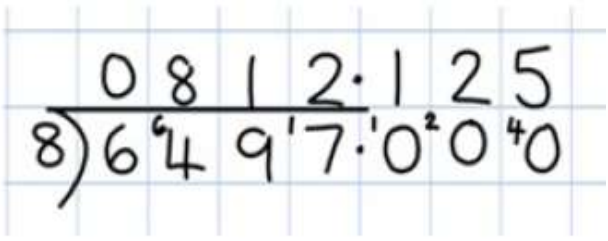
Taken from KS2 SATs marking guidance:

when dividing by 28, the pupil reaches the answer 6 r14, then the mark(s) will be awarded for $6\frac{14}{28}$ or 6.5, but the mark(s) will not be awarded for 6 $\text{r}\frac{14}{28}$

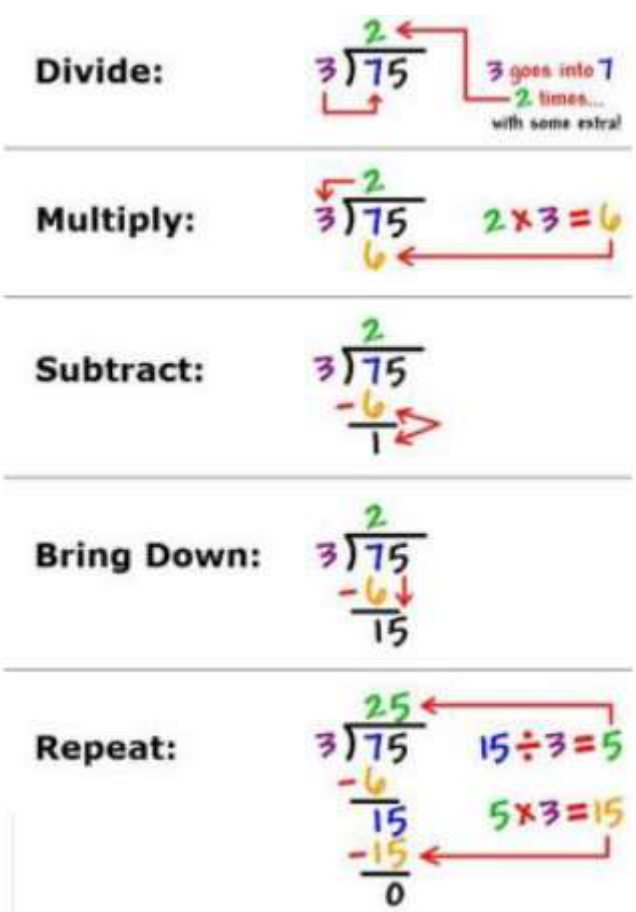
Division with remainders as decimals

The remainder in this answer would have been 1 but it has been expressed as a decimal.

To do this, children need to insert a decimal point next to the units and carry the remainder over the decimal point. Zeros are inserted to right of the decimal point to show that there was no value.



Long Division



D – Divide
M – Multiply
S – Subtract
B - Bring Down

Does McDonald's Serve Burgers?

564 ÷ 13

Using known multiplication facts

1	13
2	26
4	52
5	130
8	104
10	260

$$13\overline{)564} = 43 \text{ r } 5 = 43\frac{5}{13} = 43.38...$$

$$13\overline{)564.00} = 43.38...$$

Divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context

564 ÷ 13

$$13\overline{)564.00} = 43.38...$$

52
44
−39
50
−39
110
−104
6

$$= 43 \text{ r } 5 = 43\frac{5}{13} = 43.4 \text{ (to 1dp)}$$