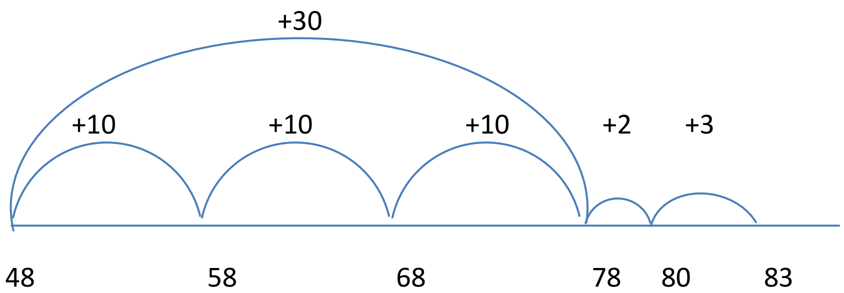
End-of-Key Stage 1 standards – Statements for working at the expected standard

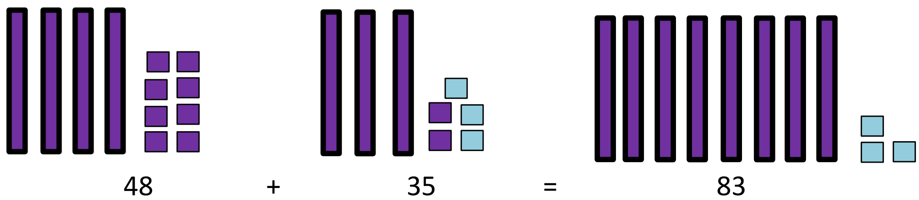
The pupil can partition two-digit numbers into different combinations of tens and ones. This may include using apparatus (e.g. 23 is the same as 2 tens and 3 ones which is the same as 1 ten and 13 ones).

Children need to show that they can choose any two-digit number and partition it into tens and ones in different ways. The example clarifies this practically using Dienes apparatus. This could also be done with other structured apparatus, such as Numicon tiles or in the context of money. The pupil's understanding is clarified through the narrative within the context.

The pupil can add 2 two-digit numbers within 100 (e.g. 48 + 35) and can demonstrate their method using concrete apparatus or pictorial representations.

This requires pupils to fully understand place value in two digit numbers – so that they can add in steps of ten and one (rather than counting in ones). In the example given in the statement, children should apply their knowledge of number bonds to ten as well as partitioning numbers to ten to bridge through the multiple of ten. The most obvious pictorial representation would be an unstructured number line, where the pupil starts at 48, then makes three jumps of ten (or one jump of 30) followed by a jump of two (to get to 80), then a jump of 3 (to get to 83). They could also demonstrate this with dienes, showing some exchanging (combining 8 units and 5 units, then exchanging ten). Strong evidence that they can confidently bridge through the multiple of ten or exchange.





The pupil can use estimation to check that their answers to a calculation are reasonable (e.g. knowing that 48 + 35 will be less than 100).

Being able to approximate what an answer to a calculation will be is an important skill that should be encouraged by asking questions such as "roughly, what will the answer be?" "Would the answer be more or less that 50?" It is necessary to capture children's explanations to check their strategy (and ensure they are estimating, not calculating). Further evidence could also be gathered throughout rich tasks involving calculations by asking pupils to approximate solutions before calculating. This will give more evidence that pupils are mastering this and using it instinctively as a checking strategy.

The pupil can subtract mentally a two-digit number from another two-digit number when there is no regrouping required (e.g. 74 – 33).

The pupils should be able to demonstrate that they can count back in tens and ones – or take 30 from 70 and 3 from 4 in their head. Again, they need to show that they understand place value. Use of larger numbers e.g. 87 – 43, 65 – 23 etc., with evidence that the pupil is subtracting in steps of ten and one (e.g. "I took 40 from 80, then 3 from 7" or "in my head I jumped back 4 tens, then three ones"). A number line jotting can be used for this.

The pupil can recognise the inverse relationships between addition and subtraction and use this to check calculations and work out missing number problems (e.g. Δ – 14 = 28).

Good exemplification of this could be a bar model representations, with pupils writing all four addition and subtraction statements – maybe with associated "stories" – and also evidence that pupils use addition to check their subtraction calculations when problem solving. Asking children to investigate and prove their thinking too, for example, "Sam says if you solve a subtraction problem, then you can check your answer with an addition calculation. Is he right?" – and capturing explanations and proof – would elicit understanding of the relationship.

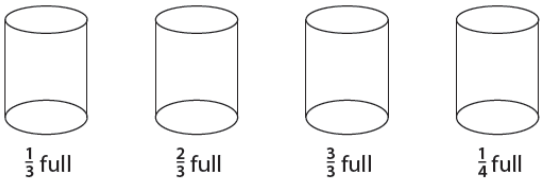
The pupil can recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables to solve simple problems, demonstrating an understanding of commutativity as necessary (e.g. knowing they can make 7 groups of 5 from 35 blocks and writing 35 ÷ 5 = 7; sharing 40 cherries between 10 people and writing 40 ÷ 10 = 4; stating the total value of six 5p coins).

A range of examples of word-problem solving (x and ÷) with annotations to confirm that they have confidently applied known facts – would exemplify this. Posing a question in marking (and capturing the pupils response) asking "what fact helped you to solve 35 apples shared between 5 people?" would also clarify pupils application of known facts.

The pupil can identify 1/3, 1/4, 1/2, 2/4, 3/4 and knows that all parts must be equal parts of the whole.

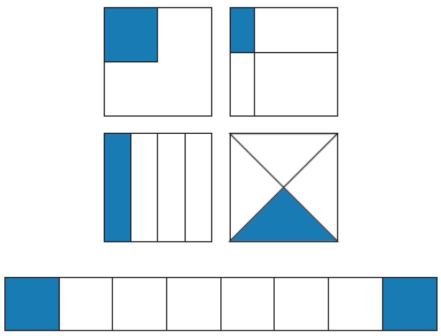
A range of contexts and opportunities to demonstrate this understanding is needed. Examples below (from Yr2 mastery document)…

Shade the cylinders.



This may first be carried out as a practical activity.

Which of these diagrams have $\frac{1}{4}$ of the whole shaded?

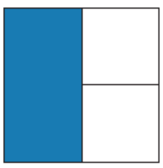


Explain your reasoning.

Jayne says that the shaded part of the whole square below does not show a half because there are three pieces, not two.

Do you agree?

Explain your reasoning.



Evidence from practical tasks can be noted through annotations / photographic evidence. Pupil's reasoning will evidence their understanding.

Children could also work with a range of practical resources to demonstrate their understanding, for instance of 2/4 being equivalent to ½.

The pupil can use different coins to make the same amount (e.g. pupil uses coins to make 50p in different ways; pupil can work out how many £2 coins are needed to exchange for a £20 note).

The pupil can read scales in divisions of ones, twos, fives and tens in a practical situation where all numbers on the scale are given (e.g. pupil reads the temperature on a thermometer or measures capacities using a measuring jug).

This is a difficult one to evidence. Pupils can't show this skill using standard measuring jugs as they would need number knowledge beyond 100 (to 500 or 1000). It is possible to count in those steps on a jug showing fluid ounces, or on a very small jug showing up to 20 / 30 / 100 ml. A further context (which sits with numbers to 100) is giving children experience of weighing letters in grams (with appropriate scales), then showing how they can read a scale marked in 2's, 5's and 10's (grams).

The pupil can read the time on the clock to the nearest 15 minutes.

Note here that pupils only have to "read" the time. In the example, the clock hands have been drawn in for them. Drawing the hands accurately can be problematic for some children with spatial / fine motor difficulties. The key point here is that they can read the times on an analogue clock (not digital, which comes in in Year 3). Annotations might be needed to evidence that the pupil confidently read a range of times to the nearest 15 minutes.

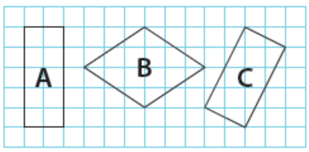
The pupil can describe properties of 2-D and 3-D shapes (e.g. the pupil describes a triangle: it has 3 sides, 3 vertices and 1 line of symmetry; the pupil describes a pyramid: it has 8 edges, 5 faces, 4 of which are triangles and one is a square).

From the mastery book:

> *Carry out activities that direct pupils' attention to properties and do not just ask them to state the name of shapes in order to allow them to demonstrate mastery.*
>
> *Asking questions like 'How do you know the shape is a triangle?' can also support pupils to develop mastery of this topic.*

Captain Conjecture says, 'All of these shapes are rectangles because they have four sides.'

Do you agree?



Explain your reasoning.

The shapes used in the example are all rather predictable and regular. A range of rich, practical activities – with pupil responses to questions and discussion noted – would provide stronger evidence.