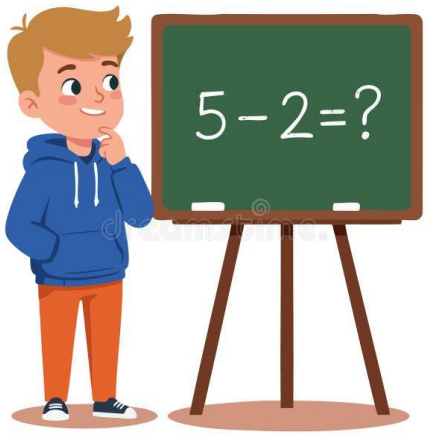
Written Calculation Guidance

Subtraction

At Joseph Turner Primary School, we are always striving to raise standard sand support our children in their learning. In order to do this, we have devised this calculation guidance to ensure there is a progression of skills from mental methods to formal written methods.

As all children learn at different paces, no year groups have been assigned to each specific method as adaptations will be made to suit each learner.

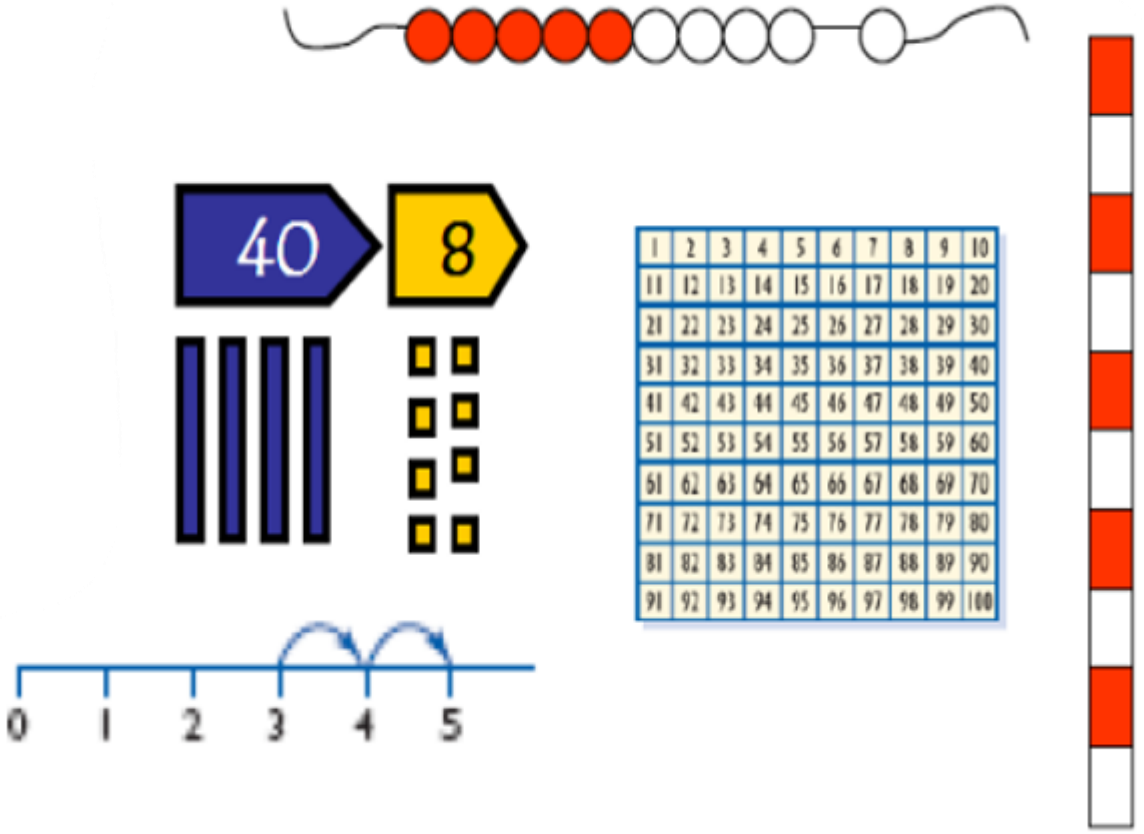
Mental Skills



- Recognise the size and position of numbers
- Count back in ones and tens
- Know number facts for all numbers to 20
- Subtract multiples of 10 from any number
- Partition and recombine numbers (only partition the minuend)
- Bridge through 10

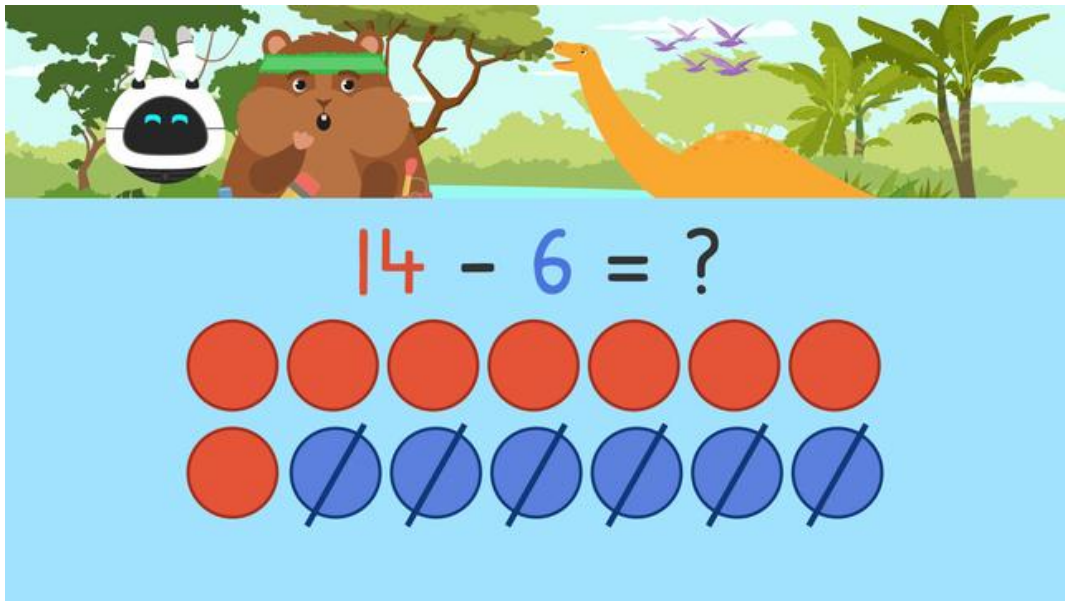
Models, Image and Apparatus

- Place value apparatus – dienes/counters/cubes
- Arrow cards
- Number tracks
- Numbered/empty number lines
- Hundred squares
- Counting stick
- Bead string
- Straws
- Rekenreks



Key Vocabulary

- Minuend
- Subtrahend
- Take away
- Minus
- Count back
- Less
- Fewer
- Difference between
- Subtract



Progression of methods

Begin to count backwards in familiar contexts such as number rhymes or stories

Continue the count back in ones from any given number

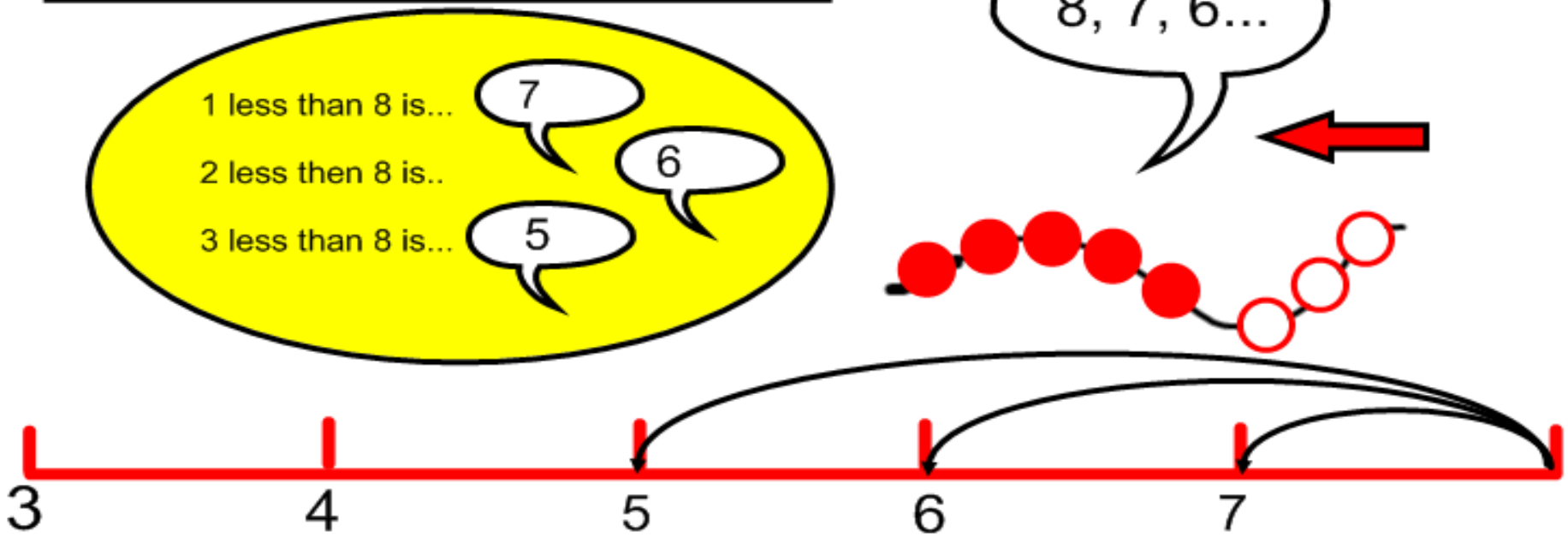
10, 9, 8, 7 . . .

Begin to relate subtraction to ' taking away '

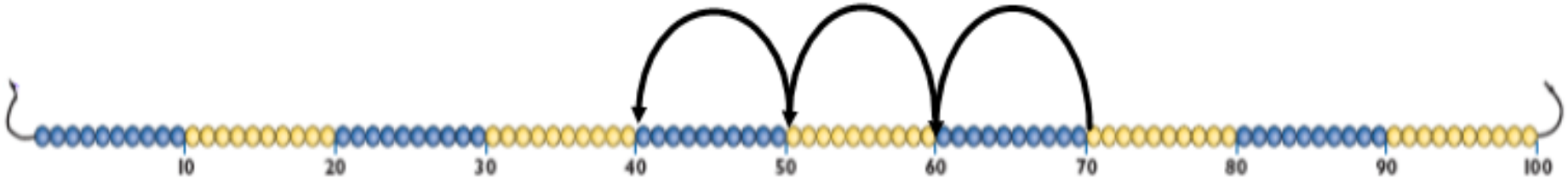
Three teddies take away two teddies leaves one teddy

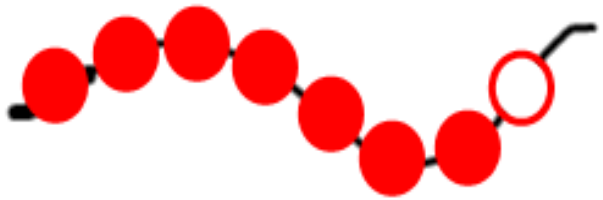
Four frogs take away three frogs leaves 1 frog

Find one less than a number
less than 10 by counting backwards



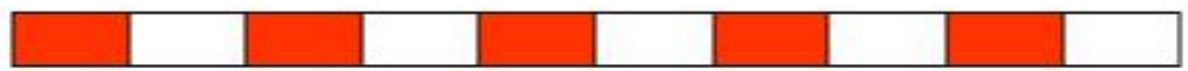
Count back in tens

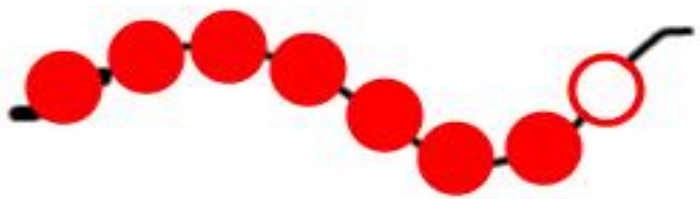




Begin to use the – and = signs to record a number sentence using numbers up to 10 whilst still using practical resources

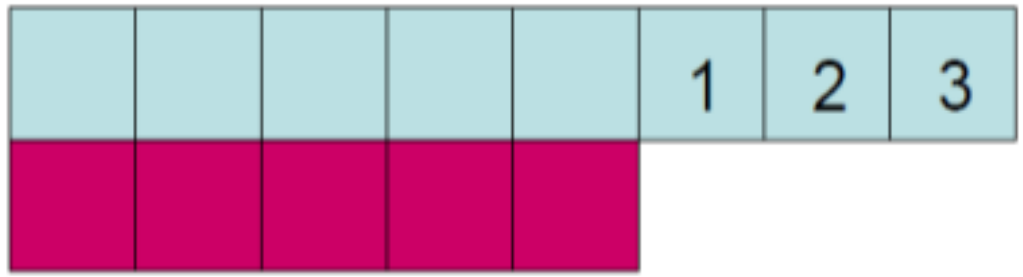
$6 - 4 = 2$





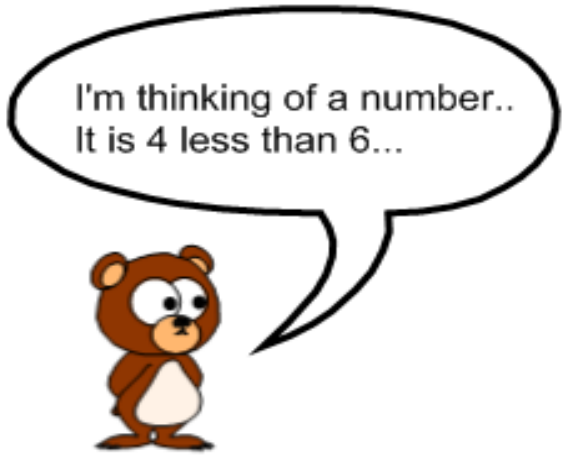
Compare 2 sets to find numerical difference

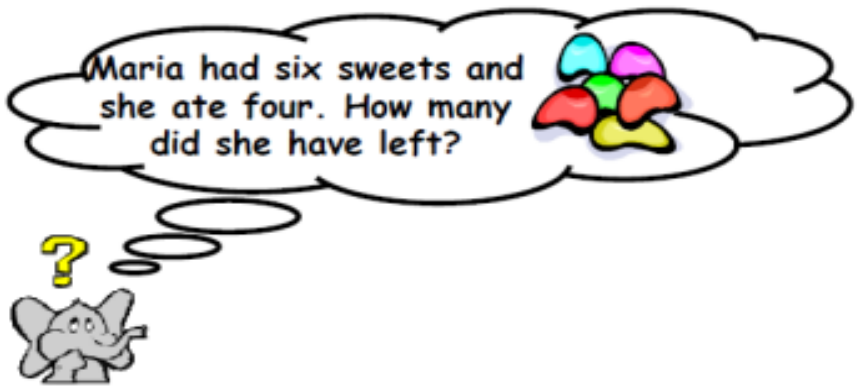
The difference between 8 and 5 is 3



Understand the operation of subtraction and use related vocab. Subtract numbers when solving problems involving up to 10 objects in a range of contexts

$6 - 4 = 2$





Within the range 1- 30 say 1 or 10 less than any number

13 – 1 =

21 – 10 =

Know by heart subtraction facts for numbers up to 10

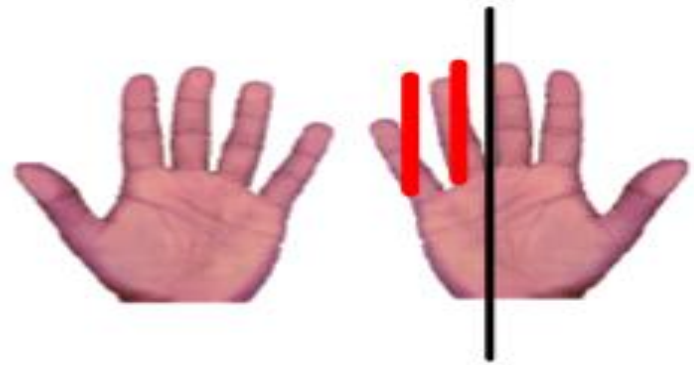
$6 + ? = 10$

$10 - 6 = ?$

$? + 6 = 10$

$10 - 4 = 6$

$7 - 2 = 5$

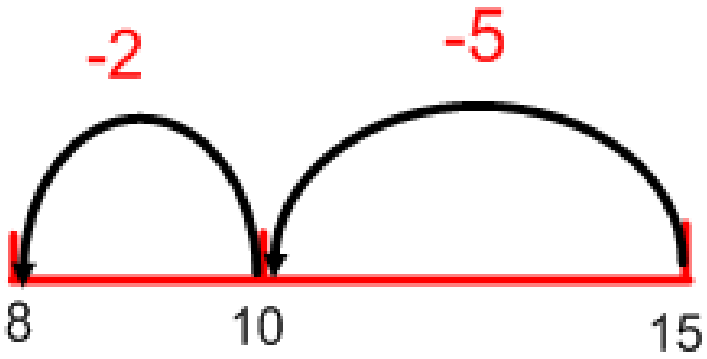


Subtract 1 from a two-digit number

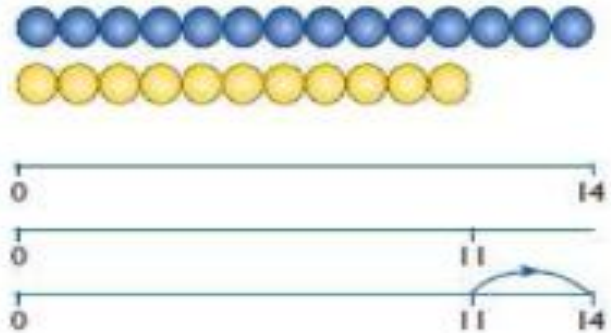
45 - 1

Subtract single digit numbers often bridging through 10

15 – 7 = 8



Begin to find the difference by counting up from the smallest number



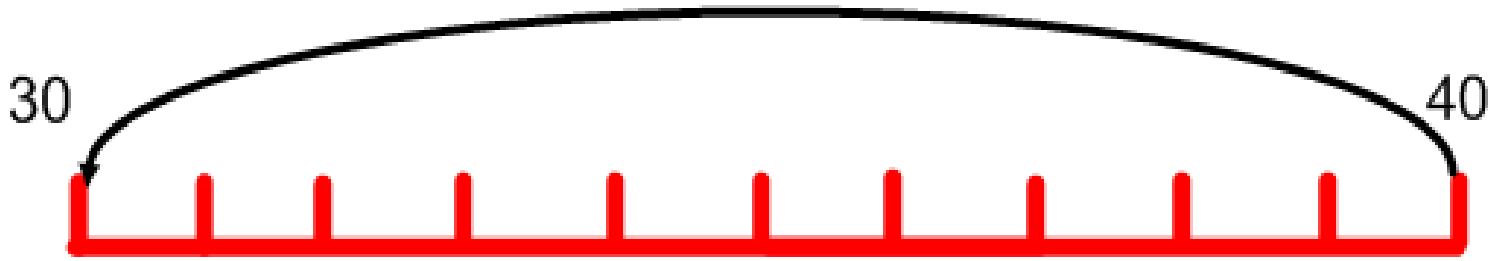
The difference between 11 and 14 is 3.

$14 - 11 = 3$

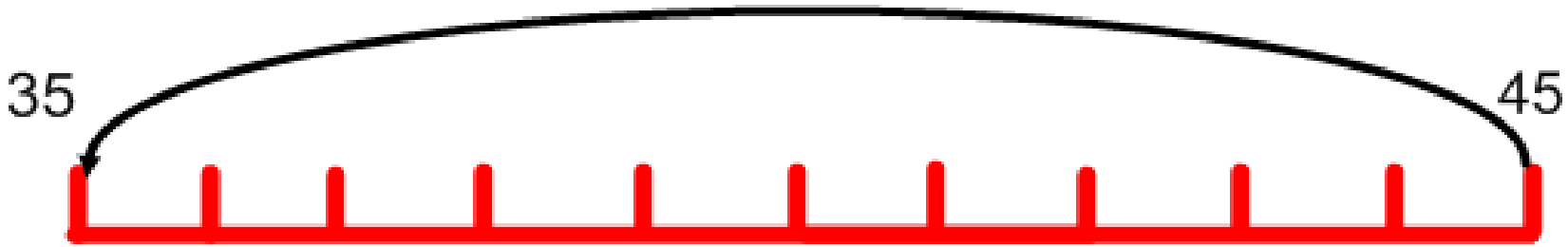
$11 + \square = 14$

The difference is?

Subtract 10 from a two-digit number

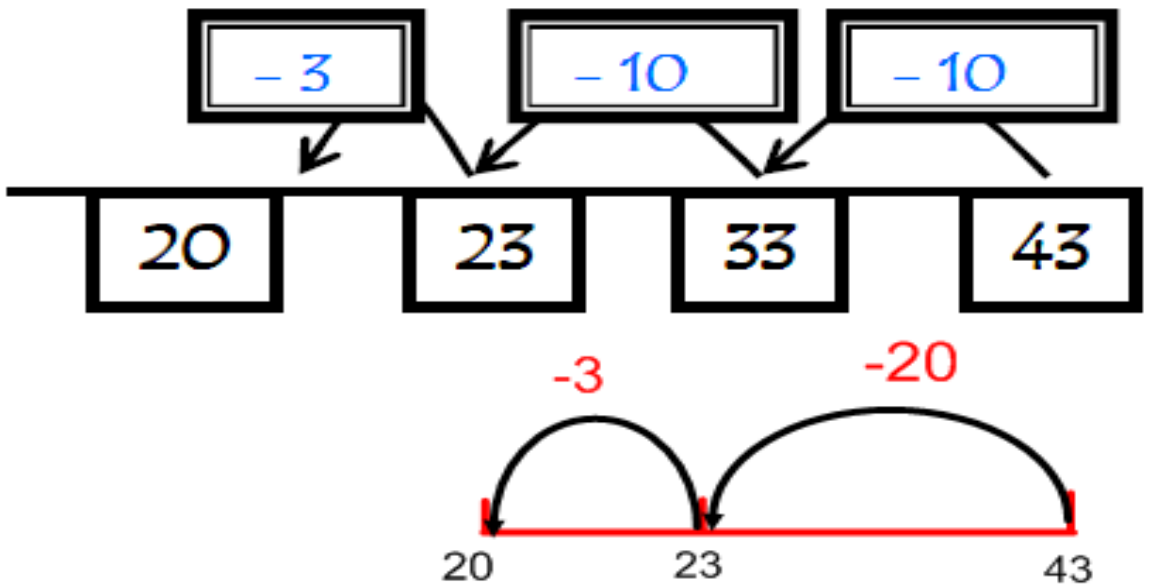


Subtract multiples of
10 from any number



Begin to partition numbers in order to take away

43 – 23



43 – 20 3

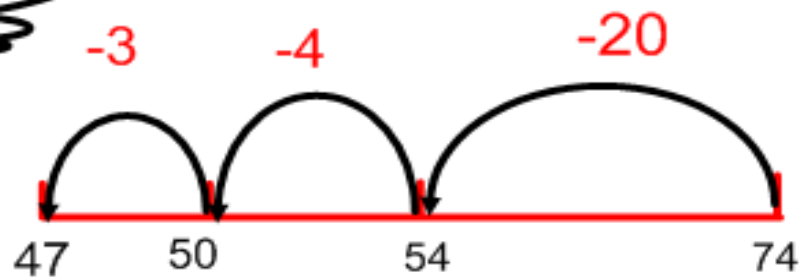
43 – 20 = 23

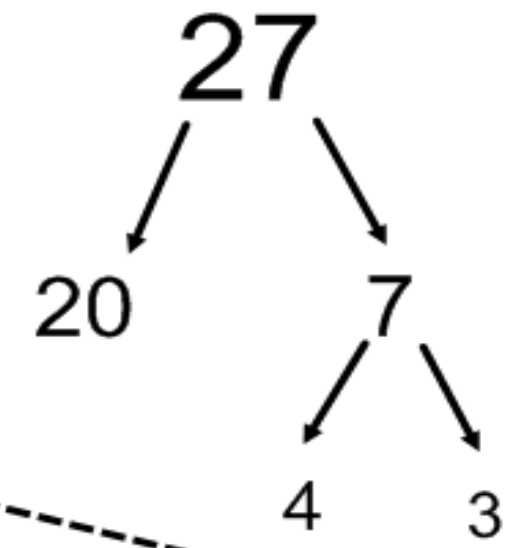
23 – 3 = 20

Count back, rather than count on

$74 - 27 = 47$

Where is the answer?

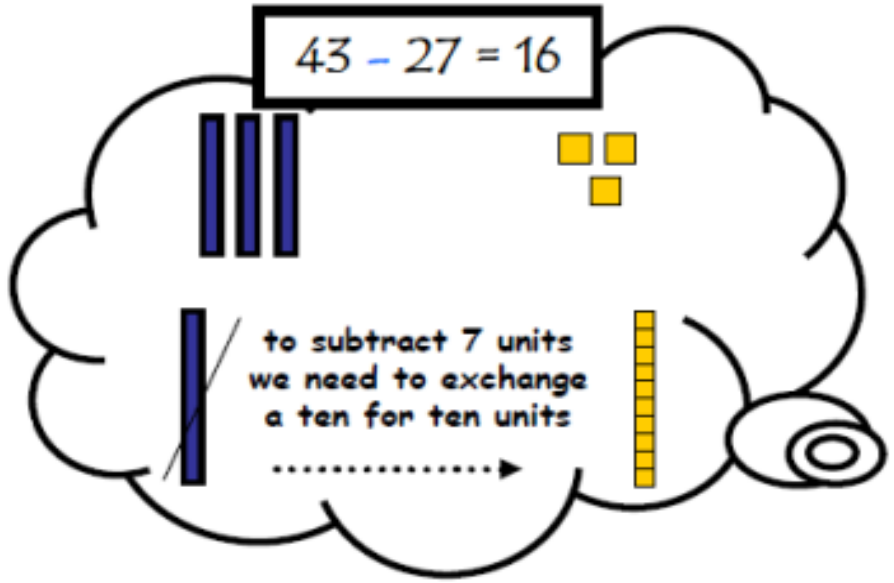




Partition the number to be subtracted (no exchanging)

Expanded method

It is important that the children have a good understanding of place value and partitioning using concrete resources and visual images to support calculations. The expanded method enables children to see what happens to numbers in the standard written method.

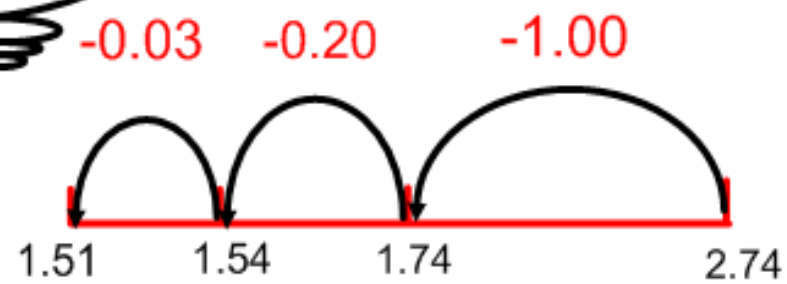


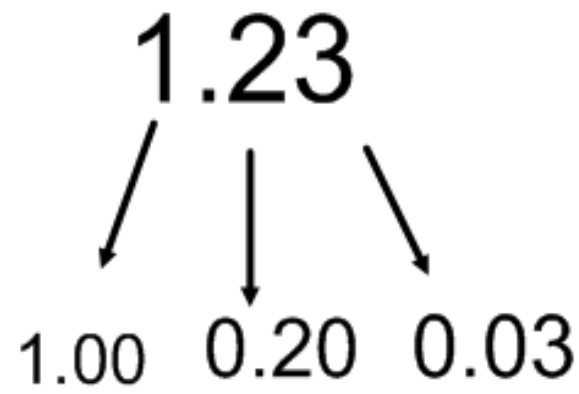
T	U
– 2	7

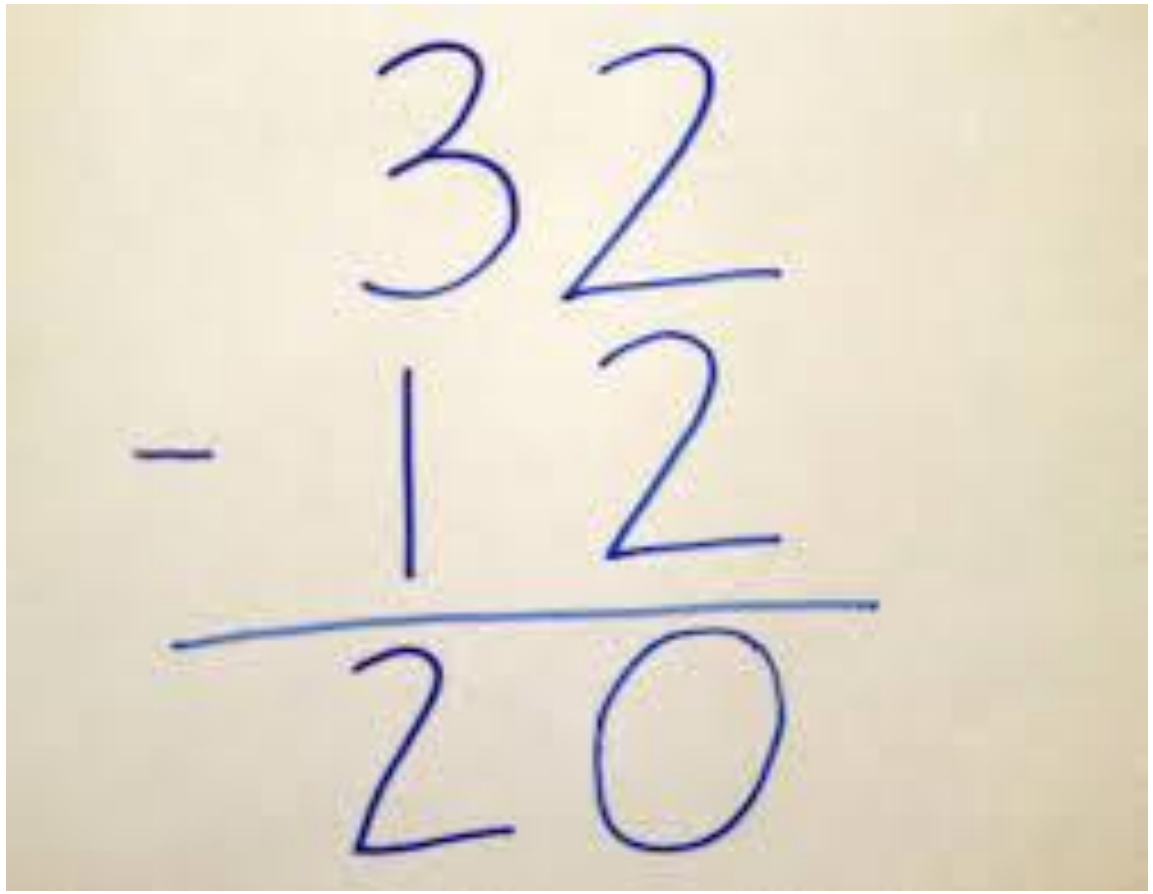
Count back, rather than count on

2.74 - 1.23 = 1.51

Where is the answer?



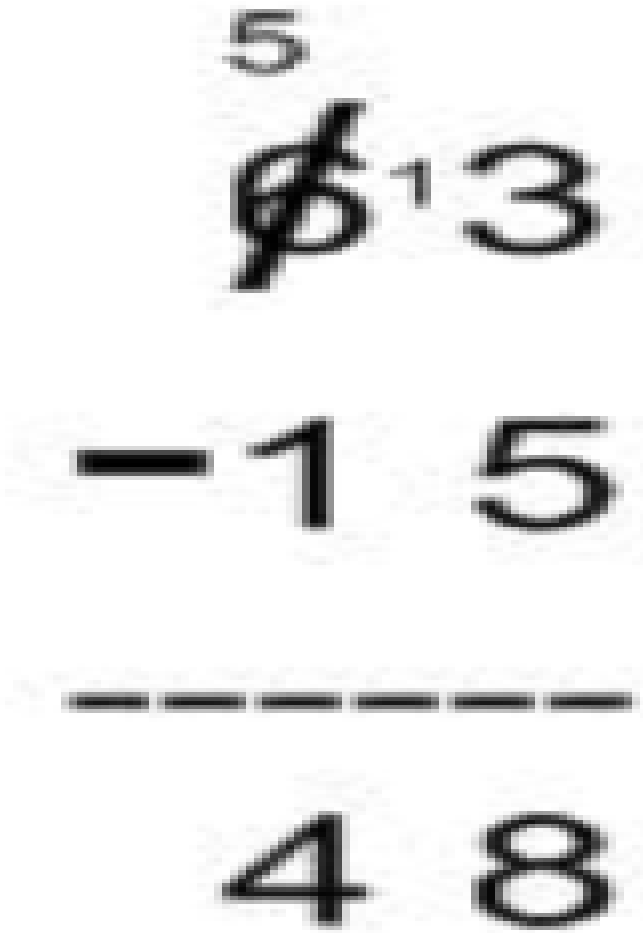



32
- 12
20

874 – 523 becomes

$$\begin{array}{rrrr} & 8 & 7 & 4 \\ - & 5 & 2 & 3 \\ \hline & 3 & 5 & 1 \end{array}$$

Answer: 351


5
6 13
−1 5
4 8

932 – 457 becomes

$$\begin{array}{rccc} & {\scriptstyle 8} & {\scriptstyle 12} & {\scriptstyle 1} \\ & \not{9} & \not{3} & 2 \\ - & 4 & 5 & 7 \\ \hline & 4 & 7 & 5 \end{array}$$

Answer: 475

932 – 457 becomes

$$\begin{array}{rccc} & {\scriptstyle 8} & {\scriptstyle 12} & {\scriptstyle 1} \\ & \not{9} & \not{3} & 2 \\ - & 4 & 5 & 7 \\ \hline & 4 & 7 & 5 \end{array}$$

Answer: 475