

## Year 2 At Shaw Ridge Our Main Calculation Methods - Guide For Parents

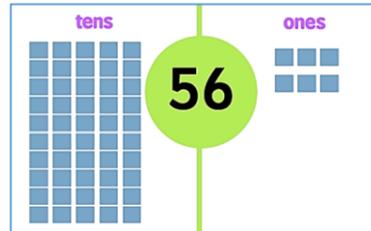
Children will develop their maths calculations throughout the year, usually starting on the ones in the yellow box and moving on to calculations in the green box when they are secure. Some children will also be introduced to methods in the red box if they have mastered the methods in the green box. If you would like to know more about a specific method, please ask.

### Adding And Subtracting Ones

Draw a number line to count each jump, then progress on to using number bonds knowledge within 20 e.g. if I know  $2 + 8 = 10$  then I know  $2 + 18 = 20$ .  
Also use their fingers to count on or back, e.g.  $22 - 5$  count back five: 21, 20, 19, 18, 17

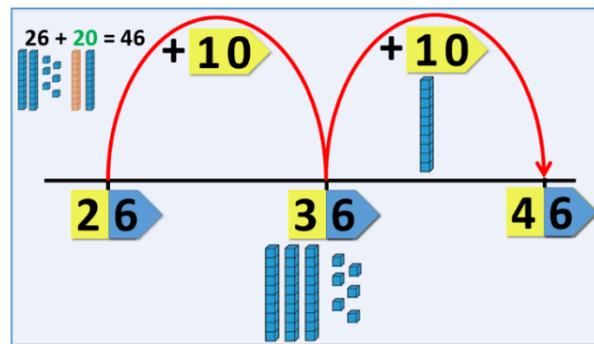
### Adding And Subtracting Two Digits

**Partition** the number into the tens and ones, with dienes blocks. E.g. 56 has 5 tens and 6 ones.



Draw a simple blank number line with the dienes underneath, and draw jumps of ten e.g.  $26 + 20$

has two jumps of ten to make 46. (Practise chanting counting in tens forwards and backwards from any number e.g. 3, 13, 33, 43, 53).



### Missing Numbers

Use known bonds to 20 to work out the missing number e.g.  $2 + \square = 20$ , I know that  $2 + 18$  makes 20 so the answer is 18.

### Times and Divide

Count in 2s, 5s and 10s to 100.

Draw **arrays** (dots in rows) to find an answer e.g.  $2 \times 3 = 6$  has this array:



Know doubles for all numbers to 20 e.g.  $3+3=6$ ,  $10+10 = 20$

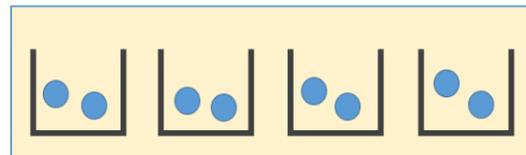
### Fractions Of Quantities

Know halves of numbers to 20 e.g. half of 18 = 9.

Find a half and quarter of a shape and a quantity by drawing dots:

$$\frac{1}{4} \text{ of } 8 = 2$$

Draw 4 buckets and share 8 dots to find that each quarter has 2 dots.



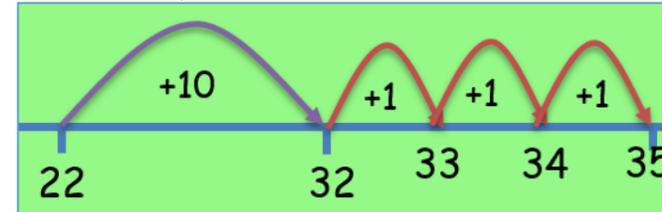
### Examples Of Other Areas To Work On

Tell the time: o'clock and half past. Name 2D and 3D shapes. Read and write numbers correctly to 100, and to 20 in words e.g. eighteen. Compare numbers with  $<$  and  $>$  signs e.g.  $12 < 18$  because 18 has 6 more ones. Recognise coins and notes.

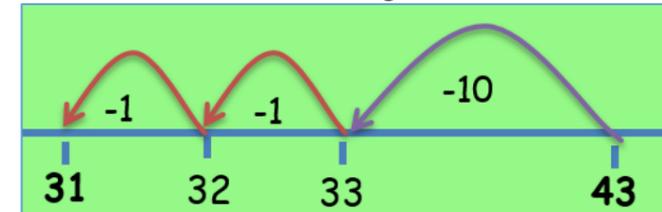
Use number bonds within 20 and apply to any numbers within 100 (e.g. I know that  $2 + 6 = 8$  so I know that  $72 + 6 = 78$ ).

Also add and subtract three numbers e.g.  $4 + 3 + 6$  by adding/subtracting two first and then the third e.g.  $4+3=7$ .  $7+6=13$ .

Draw a **blank number line**. First add/subtract the jumps of ten, and then the jumps of one, e.g. for  $24 + 13$ , start on 24 then add on one jump of ten and three jumps of one:



Start at the left for addition or the right for subtraction.



Use estimation to check the answer looks reasonable e.g.  $31 + 42$  wouldn't be as high as 100 because  $30 + 40$  is only 70.

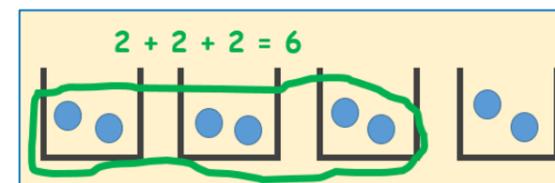
Work out whether you need to add or subtract to find the answer. Then either use the inverse to find the missing number e.g.  $12 + \square = 35 \rightarrow$  the inverse would be  $35 - 12$ . Or use subtraction  $13 - \square = 10 \rightarrow 13 - 10 = 3$  Use a blank number line to work out  $35 - 12$  to find the answer

Know 2, 5 and 10 times tables (up to  $12 \times$  each number) and count in threes to at least 36. Use known times tables to solve division e.g.  $30 \div 10 = 3$  because I know  $3 \times 10 = 30$

Draw dots in 'buckets' to find  $\frac{1}{3}$  and  $\frac{3}{4}$  of a number. For  $\frac{3}{4}$  find quarters and then add together three of them:

$$\frac{3}{4} \text{ of } 8 = 6$$

Also know that  $\frac{2}{4}$  is the same as one half.



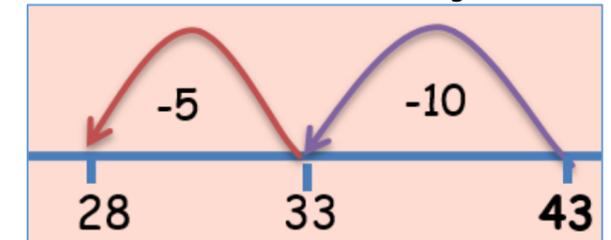
Tell the time including quarter past and quarter to. Read and write numbers to 100 in words e.g. thirty eight. Make amounts of money in different ways and work out change. Know which measure to use for liquids (ml, l), temperature (degrees), length (mm, cm, m, km) and weight (g, kg) and read scales in 2s, 5s and 10s.

Cross the tens using known number bonds e.g. for  $43 + 9$ ... I can break down 9 into  $7 + 2$  and I know that  $43 + 7 = 50$  so  $43 + 9 = 52$ .

Use reasoning e.g. the sum of three odd numbers will always be odd.

Cross the tens e.g.  $49 + 25$  (because the  $9+5$  is more than 10). Use the blank number line to do 49 add the two tens first to get 69 and then add the five ones to get the answer 74.

Similarly  $43 - 15$  as we cannot do  $3-5$ , so we would draw 43 subtract one jump of ten to get to 33, then subtract the 5 ones to get 28.



**Please note: we do not teach the column method until year 3 in order to ensure all children have a solid understanding of addition and subtraction within 100 first.**

Two step problems e.g.  $12 + \square = 5 \times 7$   
Solve  $5 \times 7$  first, and then the missing number

Know 2, 3, 5 and 10 times tables and associated division.

Begin to find simple remainders:  $15 \div 2 = 7r1$  because  $2 \times 7 = 14$ .

Use times table knowledge to solve fractions e.g. I know that  $3 \times 7 = 21$  so  $\frac{1}{3}$  of 21 is 7.

Two step problems e.g. which is more, half of 30cm or three quarters of 24cm (solve both fractions and then compare the answers to find which is greater).

Tell the time to the nearest 5 minutes e.g. 20 past, 25 to.

Read measuring scales going up in 2s, 5s and 10s, with some numbers missing e.g. a jug showing 100ml, 150ml, 200ml with marks for each 10ml.