

Mental calculations that children should be able to recall quickly:



- Multiplication facts for the 2, 3, 4, 5, 6, 7, 8, 9 and 10 times tables, e.g. 7×9
- Division facts corresponding to the 2, 3, 4, 5, 6, 7, 8, 9 and 10 times tables, e.g. $27 \div 3$

Useful websites



www.bbc.co.uk/schools/bitesizeprimary
http://www.bbc.co.uk/schools/websites/4_11/site/numeracy.shtml
<http://nrich.maths.org>
<http://resources.oswego.org/games>
www.subtangent.com/mathsgames.php
www.woodlands-junior.kent.sch.uk
www.coxhoe.durham.sch.uk
www.teachingtables.co.uk
<http://www.multiplication.com>
<http://www.coolmath4kids.com/>
<http://www.primarygames.com/math.htm>
<http://www.wmnet.org.uk/resources/gordon/Hit%20the%20button%20v9.swf> OR google—hit the button

Carr Hill Community Primary School



Supporting Mathematics in Year 4

This booklet has been written to support parents and children in maths. It explains the different methods we use to solve +, -, x and ÷ calculations. It also includes some useful websites and activities to do at home.



Working Together for our Children
Carr Hill Community Primary School

Addition methods in Year 4



- Children begin by partitioning numbers into hundreds, tens and ones:

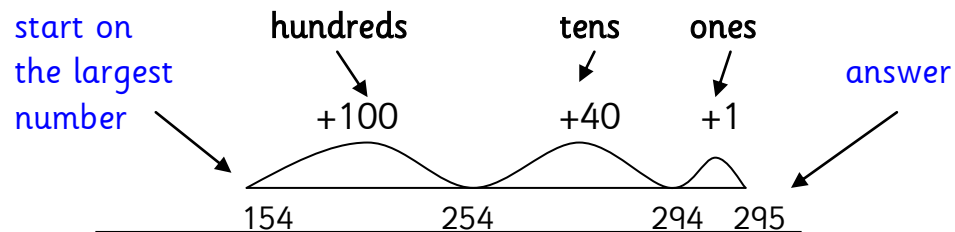
partition, then add the hundreds, tens and units

Partitioning means breaking it down into hundreds, tens and units, so
 $234 = 200 + 30 + 4$

$$\begin{aligned} 234 + 145 &= \\ &= (200 + 100) + (30 + 40) + (4 + 5) \\ &= 300 + 70 + 9 \\ &= 379 \end{aligned}$$

- They then use a blank number line by starting on the largest number, then adding the hundreds, tens and the ones from the other number.

$$154 + 141 = 295$$



- Then use the extended method, using column addition to solve:

$$426 + 178 = 604$$

$$\begin{array}{r} 426 \\ + 178 \\ \hline 14(8+6) \\ 90(70+20) \\ \hline 500(400+100) \\ \hline 604 \end{array}$$

first add the units
 next add the tens
 then add the hundreds
 finally add up each column

Fun activities to do at home



Money

- Use a catalogue and ask children to choose 5 items under £20. Calculate how much they cost and the change from £100.
- Give them a budget for the week/month – encourage them to keep a record of their spending and what they have left
- Can your child help you research a holiday destination? What will it cost? What is the temperature likely to be? What is the exchange rate? What is the cheapest way to get there?



Measures and shape

- Measure objects length, their width, their height. Ask questions such as: What's the tallest item in the house? Smallest? Widest?
- Involve your child with cooking; encourage them to weigh the different ingredients.
- Reinforce telling the time. What times of the day do they do different things? How long do they spend on each activity?
- Play shape bingo. Draw six shapes and ask someone to read out clues and see if you can cross them off.

Fun activities to do at home

Games



- Play board games like Monopoly that involve counting, money, addition and subtraction. Play card games that require and practise mental agility like pontoon (21).
- Playing darts it is a good way to help children get faster at mental maths.

Number



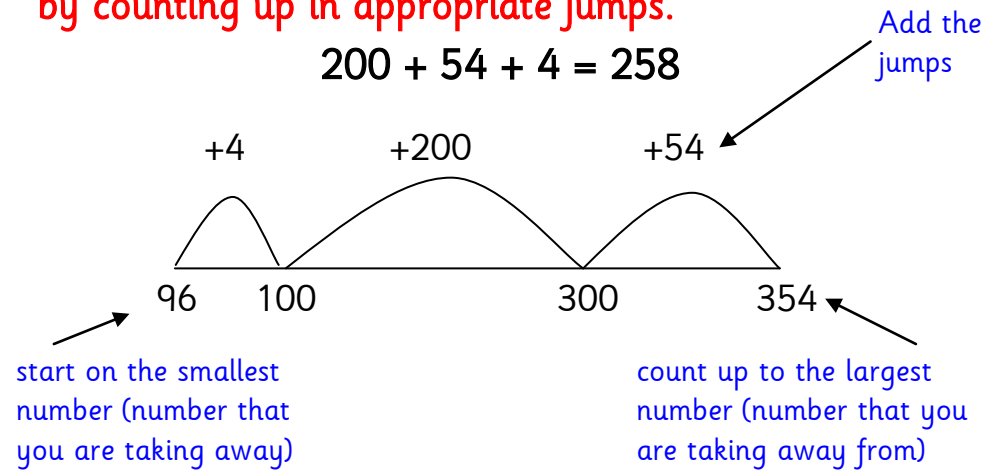
Practise:

- Counting in 2's, 3's, 4's, 5's, 6's, 7's, 8's, 9's 10's and 100's.
- All times tables up to 10x10
- Make a card game. Multiplication table on one card, answer on another. Match them up.
- Writing and reading numbers to 10,000
- Use the language of fractions when dividing pizzas, pies, cakes. Cut pizzas into given fractions e.g. $\frac{1}{4}$. What do they notice if someone is given $\frac{1}{4}$ and another $\frac{2}{8}$?
- When out shopping round prices to the nearest number.
- Roll 3 dice. Make all possible 3 digit numbers e.g. 2, 6, 4 could make 246, 264, 426, 462, 642, 624. Order them.
- Make up some word problems about something they enjoy e.g. football, comic characters. Try to ensure they include all the operations (+, -, x, ÷)

Subtraction methods in Year 4



- Children begin using a blank number line to solve $354-96$ by counting up in appropriate jumps.



- Next they use the extended method to solve $475 - 193 = 282$ by counting up from the smallest number until they reach the largest number.

- start with 193 and count on target number to 475

475	
-193	
$\hline 75$	
200	(200)
75	(400)
$\hline 282$	(475)
$\hline 282$	
\swarrow	

total so far

$193 + 7$ to make 200

$200 + 200$ to make 400

$400 + 75$ to make 475

add them altogether

Multiplication in Year 4



- We begin by using the grid method where children partition the number into tens and units to make it easier to multiply: $33 \times 6 = 198$

x	30	3
6	180	18

Partition 33 into 30 + 3 then multiply each by 6 and find the total

$$180 + 18 = 198$$

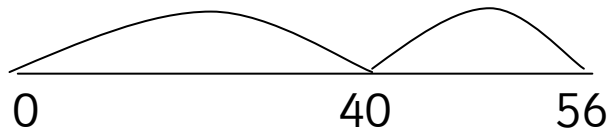
- Children then solve multiplication problems using repeated addition:

$$14 \times 4 = (14 \text{ groups of } 4)$$

Partition 14 into 10 + 4 then multiply each by 4, counting on the number line

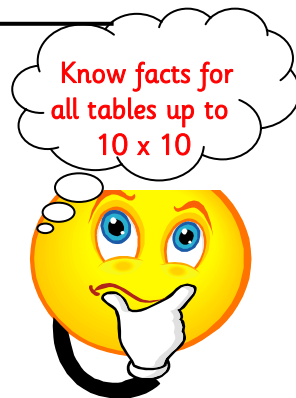
$$10 \times 4 = 40$$

$$4 \times 4 = 16$$



$$\text{So, } 14 \times 4 = 40 + 16 = 56$$

- Children also use their times tables knowledge to help solve multiplication problems so this needs regular practise.



Division in Year 4



- Children use empty number lines and multiplication knowledge to solve division problems. So that $176 \div 6$ is solved using their knowledge of multiplication facts.

count up in sets of 6 (jumps)

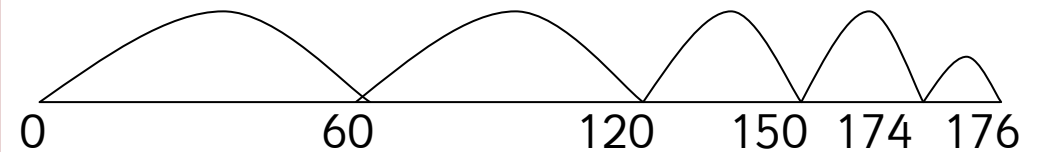
remainder or left over

$$10 \times 6 = 60$$

$$10 \times 6 = 60$$

$$5 \times 6 = 30$$

$$4 \times 6 = 24 \text{ r}2$$



add up the jumps

$$\text{So: } 10 + 10 + 5 + 4 = 29$$

$$176 \div 6 = 29 \text{ r}2$$