

# Oak Tree Primary School



## A Guide to Calculations in Year 2

# Addition

- **The + and = signs and missing numbers**

Children will be expected to continue using a range of equations (as in Year 1) but with larger numbers appropriate for Year 2.

For example:

$$14 + 5 = 10 + ?$$

$$32 + ? + ? = 100$$

$$35 = 1 + ? + 5$$

- **Partition into tens and ones and recombine**

Children have been taught the 'TOT' method, which stands for **tens, ones, total**.

First, write out the calculation.

Partition and add the **tens**, then the **ones**.

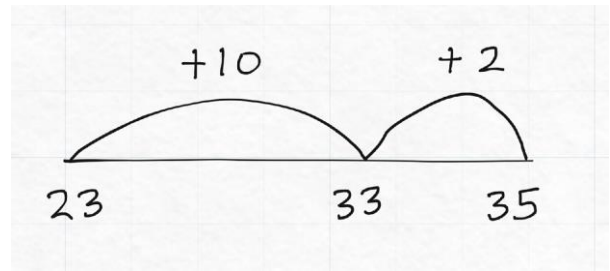
Add your answers to find the **total**.

		3	1	+	4	2		
T	3	0	+	4	0	=	7	0
O		1	+		2	=	3	
T	7	0	+		3	=	7	3

- **Partitioning the second number only**

For example:

$$\begin{aligned} 23 + 12 &= 23 + 10 + 2 \\ &= 33 + 2 \\ &= 35 \end{aligned}$$



- **Adding 10 and adjusting**

This method works well when you are adding numbers like **9** or **11**, which are close to 10.

For example:

$$35 + 9 =$$

$$35 + 10 = 35 \text{ then adjust by } -1$$

$$= 34$$

# Subtraction

- **The – and = signs and missing numbers**

Children will be expected to continue using a range of equations (as in Year 1) but with larger numbers appropriate for Year 2.

For example:

$$14 + 5 = 20 - ?$$

- **Find a difference by counting up**

For example:

$100 - 65 = 35$   
We can use a numberline to help!

65      70      100

+5      +30

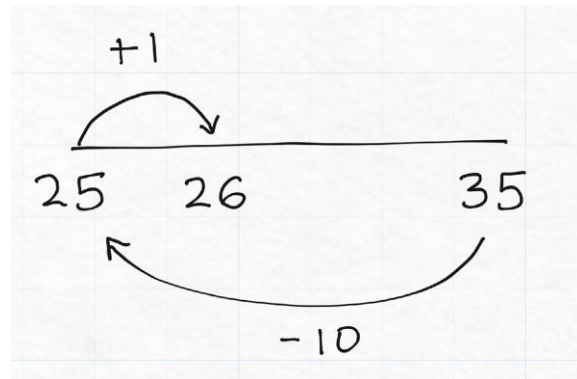
$30 + 5 = 35$

Jump to the nearest 10  
Jump to 100 (Use your number bonds!)  
Add the jumps together

- **Subtract 9 or 11, and begin to subtract 19 or 21**

For example:

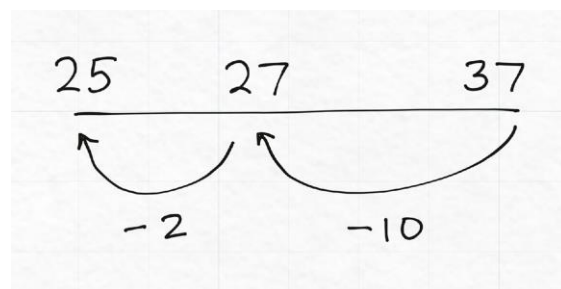
$$35 - 9 = 26$$



- **Use known number facts about place value to subtract**

Partition the second number only. For example:

$$\begin{aligned} 37 - 12 &= 37 - 10 - 2 \\ &= 27 - 2 \\ &= 25 \end{aligned}$$



# Multiplication

- The x and = signs and missing numbers

For example:

$$7 \times 2 = ?$$

$$7 \times ? = 14$$

$$? \times 2 = 14$$

$$? = 2 \times 7$$

$$14 = ? \times 7$$

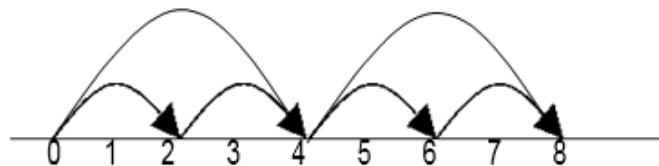
$$14 = 2 \times ?$$

- Use materials, arrays and repeated addition (including solving problems in context)


●● ●● ●● ●●  $4 \times 2$  or  $4 + 4$   
●● ●● ●● ●●  
 $2 \times 4$

Or repeated addition

$$2 + 2 + 2 + 2$$



How many minions?



1  
2  
3  
4  
5

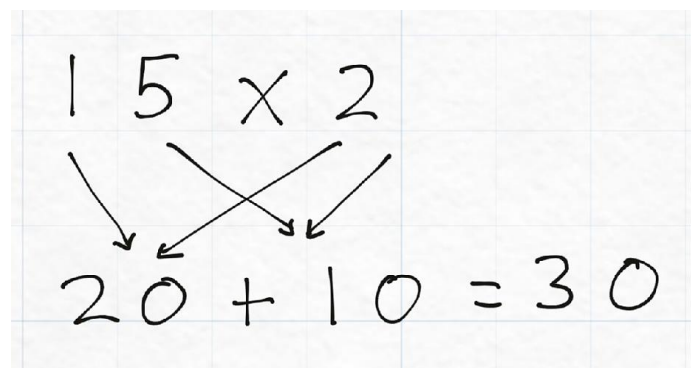
5 rows of 5  
 $5 \times 5$

'Rows of'  
'Lots of'

- Use partitioning to solve multiplication problems

Multiply the **tens**, then multiply the **ones** and add the two numbers together.

For example:


$$15 \times 2$$
$$20 + 10 = 30$$

# Division

- The  $\div$  and = signs and missing numbers

For example:

$$6 \div 2 = ?$$

$$6 \div ? = 3$$

$$? \div 2 = 3$$

$$? \div 6 = 2$$

$$3 = 6 \div ?$$

$$3 = ? \div 2$$

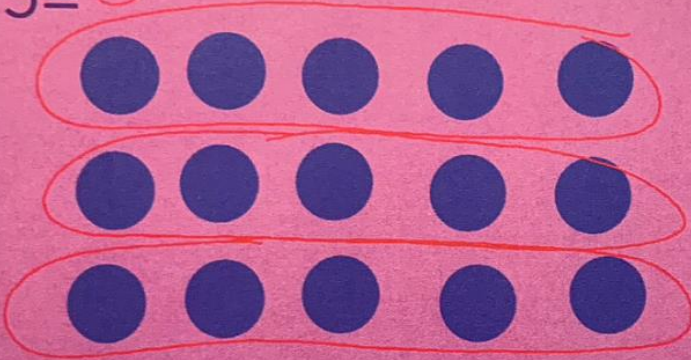
**Please turn the page.**



- Use materials, arrays and repeated addition (including solving number problems in context)

We can use arrays to help us too...

$15 \div 5 = 3$



We want to see how many groups of 5 there are in 15. Let's create the array.

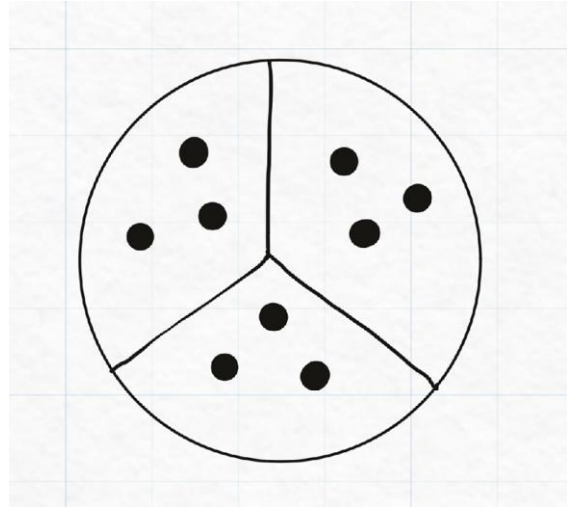
- Find and name fractions of length, shape and sets of objects and quantities.

Children may be asked to find a fraction of an amount.

For example,  $\frac{1}{3}$  of 9.

We use the **pancake method** to find fractions of amounts.

First, draw a pancake. Then separate the pancake depending on the fraction you are working with.



To find  **$1/3$  of 9**, separate your pancake into **3 pieces**.

Place one dot in each section of the pancake until you have reached 9.

To find  $1/3$  of 9, count how many dots are in **one** section of your pancake.