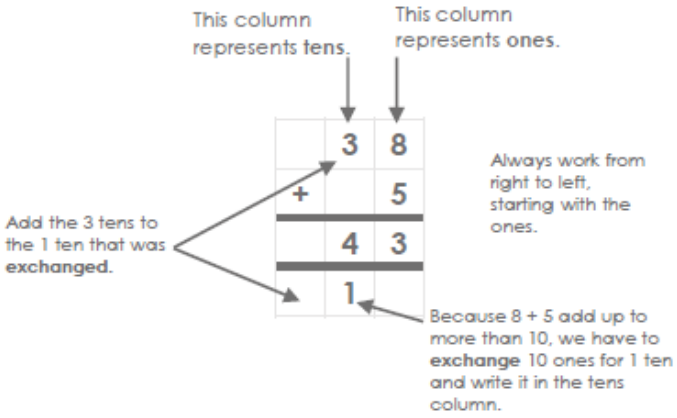
Maths – Add 2-Digit and 1-Digit Numbers (page 8)

A 2-digit number is a number that has both tens and ones in it, for example, 11, 29 or 47. A 1-digit number only has ones in it, such as 2, 5 or 8.

Question 1

This question shows two sets of **place value counters** representing a 2-digit and a 1-digit number. **Place value counters** are a physical resource which represent numbers. They are usually in different colours and have different numbers written on them to represent 'ones', 'tens', 'hundreds' and so on. Children use the **column method** to add these numbers together. Please see the diagram below on how to use **column method**.



Exchange is the term used to describe the **exchange** of 10 ones for 1 ten
This was previously known as 'carrying'.

Complete the column method addition. The correct answer is 31.

Question 2

This question again shows two sets of **place value counters re**presenting a 2-digit and a 1-digit number. Children can either work this out mentally by 'putting' the 2-digit number in their heads and then counting on, or they can use the **column method**. If you need help with place value counters or the column method, take a look at the explanations in the questions above!

The correct answer is: Ahmed finishes on 49.

Question 3

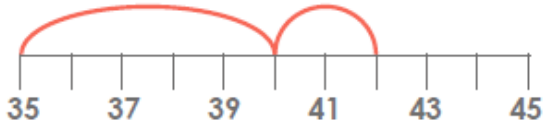
In this question, children must decide if a statement about adding a 2-digit and a 1-digit number is correct. The questions shows a **number line** used to complete the calculation. A **number line** is a horizontal, straight line which has numbers placed at equal points. Most number lines begin at 0, but this is not always the case. Here children should check the workings out on the **number line** to decide if the statement is correct or not.

The correct answer is: Yes, Joseph is correct.

Question 4

In this question, children are given an addition calculation to solve. A **number line** is also given to help children work out the answer. This **number line** only has alternate numbers marked on it. Children should count the appropriate number of 'jumps' along the **number line** and, if they finish on an unmarked line, work out the what the missing number is to find the total. If you need help with **number lines**, take a look at the explanation above!

Use the number line to work out the answer. The correct answer is: 35 + 7 = 42.



Question 5

In this question, children are given an incomplete calculation and must find three possible answers. Using the information from the clue, children should use the three **column method** grids provided to add the same 2-digit number to three different 1-digit numbers. This will provide three different possibilities! If you are not sure about **column method**, please see page 8 for a reminder.

Complete the three column method grids. The three possible answers are: 69 + 2 = 71; 69 + 3 = 72; 69 + 4 = 73

Question 6

In this question, children are asked to check an addition calculation to see if it is correct and then explain how they know. The calculation is shown using numerals and **place value counters**. Children can work out the answer mentally by 'putting' the 2-digit number in their head and counting on, or they could use a **number line** or use the **column method**. If you're not sure about **column method**, **number lines** or **place value counters**, take a look at the previous two pages for a reminder!

The correct answer is Kyle is correct because 7 + 7 = 14 and 14 + 30 = 44. Children may explain how they reached this answer differently, so explanations may vary.

Question 7

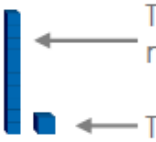
In this question children are asked to check three addition calculations using a blank **number line** to decide which calculation is incorrect. The number line provided is blank because the starting number for each calculation is different. Children should put the 2-digit number at the start of the **number line** and then count the appropriate number of 'jumps' along the line to find the answer. If you need more help with **number lines**, take a look at the previous page.

The 'X' should be next to A because 9 + 36 = 45, not 44.

Remember, when adding or subtracting tens, the **ones** never change. '**Ones**' were known as units prior to the National Curriculum update in 2014.

Question 1 – In this question children are given two incomplete calculations – one is a column addition and the other is a column subtraction. Both the top 2-digit numbers and the answer to each calculation are also represented using **Base 10** equipment.

Base 10 equipment is a physical resource which represent numbers.



The rods represent 'tens' and are made up of 10 small cubes.

The small cubes represent 'ones'.

In calculation A, children should work out how many tens must be added to 2 tens to make 6 tens. In calculation B, children should work out how many tens must be subtracted from 7 tens to leave 5 tens.

Complete the calculations. The correct answers are:

A.

	2	2
+	4	0
	6	2

B.

	7	7
–	2	0
	5	7

Question 2 – In this question, children are given a scenario and three possible answers to choose from. There are two amounts of money (also shown in coins) to be added together. Children should look for a calculation that currently adds 3 tens and 4 tens together and the ones don't change.

Choose the correct calculation. The correct answer is C.

Question 3 – In this question, children are given an amount of money (also shown in coins), some **digit cards** and two incomplete column subtraction grids. **Digit cards** refers to a physical resource which can be used to create numbers. The digits 0 to 9 are written on individual cards (or paper) and can be ordered to make different numbers.

Children should choose one of the digit cards to use as the missing tens digit and then use the other two digit cards to show the answer to the subtraction. There are two possible answers. Some children may like to use images of the coins to help them work out the answers, by crossing out the appropriate number of 10p coins for each subtraction.

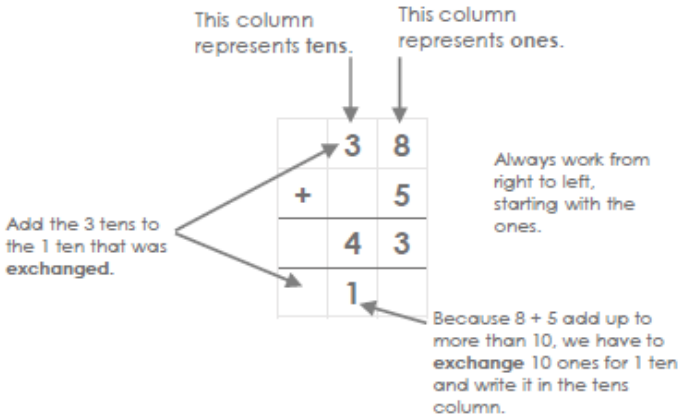
The correct answers are:

	7	3
–	3	0
	4	3

	7	3
–	4	0
	3	3

Maths – Add 2-Digit Numbers (page 4)

All of the questions in this activity use the **formal written method** (also known as **column method**) to solve the calculations.



Exchange is the term used to describe the **exchange** of 10 ones for 1 ten. This was previously known as 'carrying'.

Question 1 – In this question, three different column additions are given and children need to identify which one is correct by working out each addition using the column method shown above. The letters 'T' and 'O' stand for tens and ones.

The correct answer is C.

Question 2 – In this question, three different column additions and three different answers are given. Children need to match each column addition to one of the three answers. Children should work out each column addition using the method shown above.

The correct answers are: A. 82; B. 72; C. 92

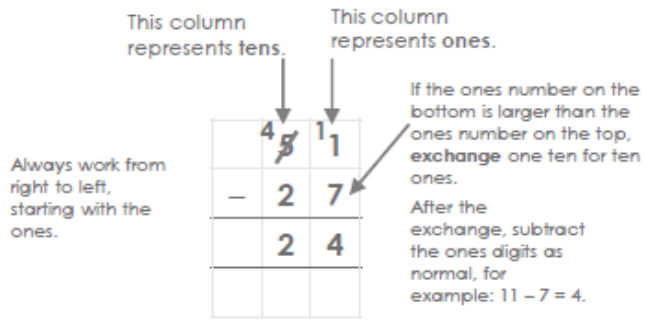
Question 3 – In this question, a statement is given involving the number of big and small birds that need to be fed by the zookeeper. Using the column addition method, children should work out the total number of birds and then decide if the statement is correct or not. They should then explain, using addition, how they reached their answer.

The correct answer is that Ana is incorrect. She has added the ones up correctly but she has forgotten to add the extra 10 in the tens column. There are 72 birds altogether, not 62.

	3	8
+	3	4
	7	2
	1	

Maths – Subtract with 2-Digits (page 6)

Question 1 – This game involves a dice, a number square and **column subtraction. Column subtraction** is the formal written method for subtracting two 2-digit numbers.



Exchange is the term used to describe the **exchange** of 1 ten for 10 ones. This was previously known as 'borrowing'.

Follow the instructions on page 6 to play the game and use the blank column method grids to complete each subtraction calculation.

Various routes possible, for example:

99	98	97	96	95	94	93	92	91	90
89	88	87	86	85	84	83	82	81	80
79	78	77	76	75	74	73	72	71	70
69	68	67	66	65	64	63	62	61	60
59	58	57	56	55	54	53	52	51	50
49	48	47	46	45	44	43	42	41	40
39	38	37	36	35	34	33	32	31	30
29	28	27	26	25	24	23	22	21	20
19	18	17	16	15	14	13	12	11	10
9	8	7	6	5	4	3	2	1	0

	9	9
–	1	6
	8	3

	7	13
–	4	5
	3	8

	3	8
–	1	2
	2	6

	2	6
–	1	1
	1	5

	1	5
–	1	3
		2

Maths – Bonds to 100 – Tens and Ones (page 8)

A **bond to 100** is two numbers that add up to 100, for example: 47 + 53 = 100.

Question 1 – In this question, children are given six different 2-digit numbers; represented by numerals, words or using **Base 10** equipment (see explanation in question 1, page 2). They need to match each number with one other number to make a total of 100. Children should use the **column method** to add two numbers together. If you're not sure about column method, please see the explanation on page 4.

The correct answers are: A and 1, B and 3, C and 2

Question 2 – In this question, children are given a statement about a number bond to 100 and they have to decide if it is correct or not. **Base 10** equipment is used to represent one of the numbers (see explanation in question 1, page 2). Children should add the two numbers together using the **column method**. If the total is 100 then the statement is correct, if the total is not 100 then the statement is incorrect.

The correct answer is: Daniel is correct.

Question 3 – In this question, there is a grid with six different 2-digit numbers in it. Some are represented by **Base 10** equipment again, so children should work out what these numbers are first and write them on the sheet. Children need to find two pairs of numbers that each add up to 100. Children should use the **column method** to add different combinations of numbers to find the two pairs that total 100.

The correct answers are: 25 and 75, 87 and 13

Question 4 – In this question, children are given a number sentence with one part missing. The first number is represented by **Base 10** equipment again, so children should work out what this number is first and write it on the sheet. They then have a choice of three numbers that could be added to the first number to make 100. Children should use the **column method** to add the first number to each of the three possible answers, until they find the one that makes a number bond to 100.

The correct answer is: 41

Question 5 – In this question, a character (Ahmed) is making a statement about a number bond to 100 and children need to work out if the statement is correct or not. Ahmed says, he has 64 represented using **Base 10** equipment. If you're not sure about Base 10 equipment, please see the explanation in question 1, page 2. Children should check whether Ahmed is correct about the 64 first. Then they should use **column subtraction** to take 64 away from 100 to find the missing number. If you're not sure about column subtraction, please see the explanation in question 1, page 6. Once they have found the missing number, children can decide if Ahmed's statement is correct or not.

The correct answer is: Ahmed is incorrect because 64 + 45 is not a bond to 100. He needs three tens and six ones to make a bond to 100 → 64 + 36 = 100.

Question 6 – In this question, children are given four **digit cards**. **Digit cards** refers to a physical resource which can be used to create numbers. The digits 0 to 9 are written on individual cards (or paper) and can be ordered to make different numbers.

Children need to use these **digit cards** to make two pairs of 2-digit numbers that total 100. They should use **column addition** to find out if the two numbers they have made add up to 100. If you're not sure about **column addition**, please see the explanation on page 4. Children should try to use a systematic approach when swapping the digit cards around, for example: they could try 95 + 14, then 95 + 41, then 94 + 15, then 94 + 51 etc. They should also look for any number bonds to 10 to help them.

There are various possible correct answers, for example: 41 + 59; 51 + 49

Question 7 – In this question, a character (Russ) is giving clues to find two numbers that make a number bond to 100. In the first number, the tens and ones digits are the same, so this could be 11, 22, 33, 44, 55, 66 etc. Children should use **column subtraction** to take each of these numbers away from 100, in order to find the second number, which has more than 5 tens. If you're not sure about column subtraction, please see the explanation in question 1, page 6. Children have to find two possible answers.

The possible answers are: 11 and 89, 22 and 78, 33 and 67 or 44 and 56