National Curriculum Statement	All students		
	Fluency	**Reasoning**	**Problem Solving**
Addition and Subtraction Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts to 100.	• **Fill in the gaps:** __ + 16 = 20 20 - __ = 5 20 + 80 = __ 100 - __ = 30 • Add the tens together in the circles. Find the total. • Harry has 15p. Which coin does he need to make 20p? 	• **Continue the pattern** 90 = 100 – 10 80 = 100 – 20 Can you make up a similar pattern starting with the numbers 75, 25 and 100? • **Missing numbers** 81 + ___ = 100 100 - ___ = 89 Explain how you can use number bonds to 10 to find the missing numbers above. • Sam says 'If I know 9 + 1= 10, I also know what I add to 90 to make 100.' Is he right? Prove it.	• Jenny has ten 10p's. How many ways can she add them together to make £1. Eg 20p + 80p • Can you find the missing number so each row and column adds up to 100? <table><tr><td>20</td><td></td><td>50</td></tr><tr><td>30</td><td>40</td><td></td></tr><tr><td></td><td></td><td></td></tr></table> • Use the numbers 1, 2 and 3. In pairs, one child chooses a number. The other child has to choose another number to add to the first number. The aim is to be the person who reaches 20 first. You must try to make sure your partner doesn't reach 20.
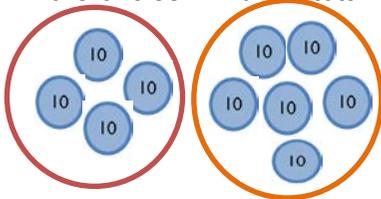
National Curriculum Statement	All students		
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Addition and Subtraction

Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: a 2 digit number and ones; a 2 digit number and tens; two 2 digit numbers; adding three 1 digit numbers.

Fluency

- Calculate:
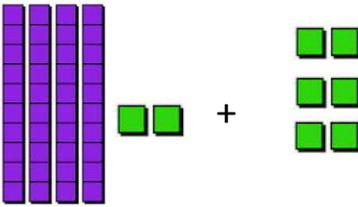
- Owen has 45 football cards, he gives 20 to his friend Jack. How many does he have left? Use the bar model to help you.
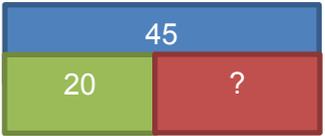
- Work out the total of each row and column.

5	4	2
3	7	8
5	7	3

Reasoning

- **True or False?**
  When you add two odd numbers together you always get an even number.
  Convince me.

- What digits could go in the boxes?

  ☐ 2 + ☐ 5 = 87

  How many ways can you do it? Show me.

- Sam says 'I am thinking of a two digit number, if I add ones to it, I will only need to change the ones digit.'
  Is he right? Explain your answer.

Problem Solving

- Take 3 consecutive numbers that are neighbours when you count. Eg 4, 5, 6.
  Add them together, what do you notice? Choose 3 more neighbour numbers up to 10. See if there is a pattern as you add them.

- Lily has 3 dogs.

  A   B   C

  Dog A and B weigh 7kg.
  Dog B and C weigh8kg.
  Dog A and C weigh 11kg.

  What does each dog weigh?

- Take five coins: 1p, 2p, 5p, 10p, 20p.
  Put them in a row using these clues. The total of the first three coins is 27p. The total of the last three coins is 31p.
  The last coin is double the value of the first coin.

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Addition and Subtraction	Show that the addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot.	• Show how the number cards can be sorted to complete each sentence. □ + □ = □ 80 20 □ = □ + □ 100 □ • □ = □ □ = □ - □ • Use the bar model below to write 2 additions and 2 subtractions. 100 63 37 • If I know 34 + 43 = 76, what other addition can I write?	• **True or False?** These four calculations have the same answer. 1 + 4 + 2 2 + 4 + 1 4 + 2 + 1 4 + 1 + 2 Explain your answer. • **True or False?** These four calculations have the same answer. 7 – 3 – 2 2- 3- 7 3 – 2 – 7 7 – 2 – 3 Use cubes to help to explain your answer. • Sid says 'In a subtraction, you always start with the biggest number and take away from that.' Do you agree? Explain your answer.	• Use the number cards below to make as many additions and subtractions as you can? How many can you make? 3 7 4 10

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	National Curriculum Statement	All students		
		Fluency	**Reasoning**	**Problem Solving**
Addition and Subtraction	Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.	• Fill the gaps: 17 + 5 = 22 22 - __ = 17 • If I know 34 + 20 = 54, what other addition and subtractions sentences do I know? • Dan calculates 67 + 8 = 75, use a subtraction to check his answer.	• Kate has baked 32 buns, she sells 15 buns. She says 'I have 16 more to sell'. Is she right? Use an addition sentence to prove your answer. • Oliver is working out a missing number problem. 17 + ___ = 24 I am going to use a subtraction to solve the problem. Explain how he is going to work out the answer.	• I think of a number. I take away 7 and add 2. My answer is 15. What is my number? • Look at the temperature on the thermometer. The temperature has dropped 8 degrees in 2 hours. What was the temperature 2 hours ago?