

# Reasoning about pattern and sequences: Identifying patterns.

# Independent task

Mr Critchlow

### To Start

#### Can you complete the number grid by putting the numbers into the correct places?



3 DIGITS		4 DIGITS		5 DIGITS	
217	625	1524	5371	<del>14261</del>	41385
246	756	1594	6174	24173	71490
251	842	2652	6205	<del>34875</del>	75216
258	924	3861	7326	35420	90162
321	925	4528	8275		
328	961	4832	9527		
367		5290			

## Task 1

Can you work out the solutions to the calculations? Write the answers in Roman numerals too

Calculation	Answer
XV + XV	
XXIII + XXIII	
MMII + MMII	
MMV + MMV	
CLXXI + CLXXI	
DCVII + DCVII	



Can you write the first 6 terms in each sequence – follow the rule and pay attention to the start number

- 1. The rule is add 10, the start-point is 11
- 2. The rule is add 5, the start-point is 37
- 3. The rule is subtract 13, the start point is 9
- 4. The rule is subtract 9, the start point is 25

5. The rule is add 100, the start point is -394

# Challenge

Fill in the inputs/outputs from these function machines. E3 (0) in 12 9 20 11 7 4 Ø 0= out 0: 0 0 Θ 0 Q O O O  $\mathbf{O}$ 83 6) in 0 **x3** 0= ITTIT out 45 42 36 0. **48** 33 27 0 0 O O 0 0 0