



# Level 3 Homework booklet 1

NAME \_\_\_\_\_

TEACHER \_\_\_\_\_

Task	Topic	Date Set	Date Completed		
1	Addition and Subtraction I				
2	Addition and Subtraction II				
3	Addition and Subtraction III				
4	Multiplication and Division I				
5	Multiplication and Division II				
6	Place Value				
7	Negative Numbers				
8	Decimal Notation				
9	Number problems				
10	Sequences				
11	Non-Calculator Number 1				

After you have completed each homework self-assess your understanding and the date you completed it

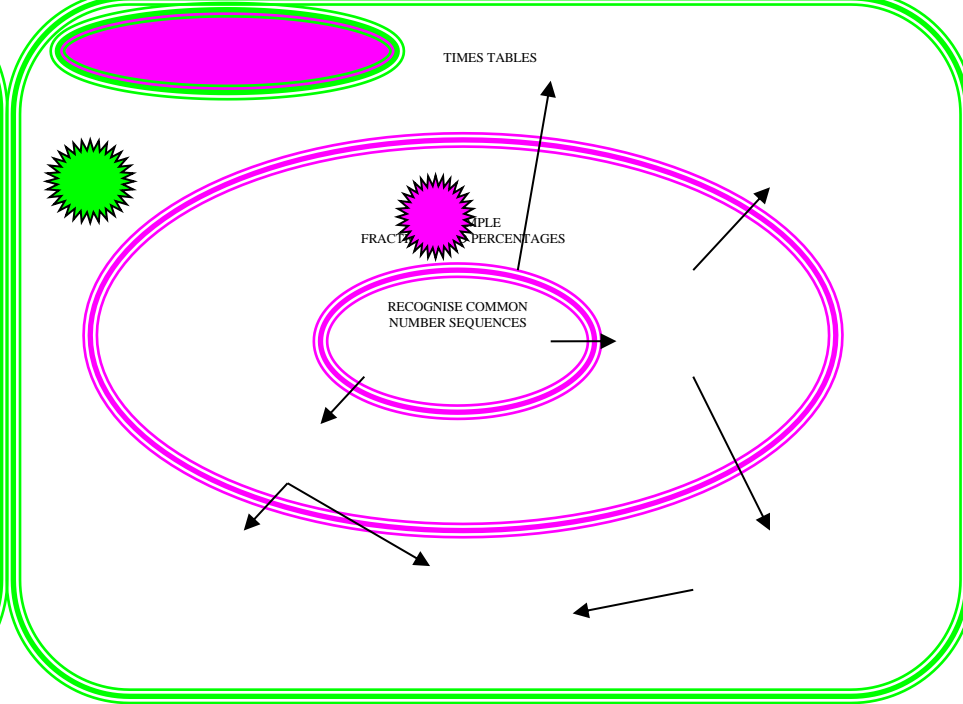
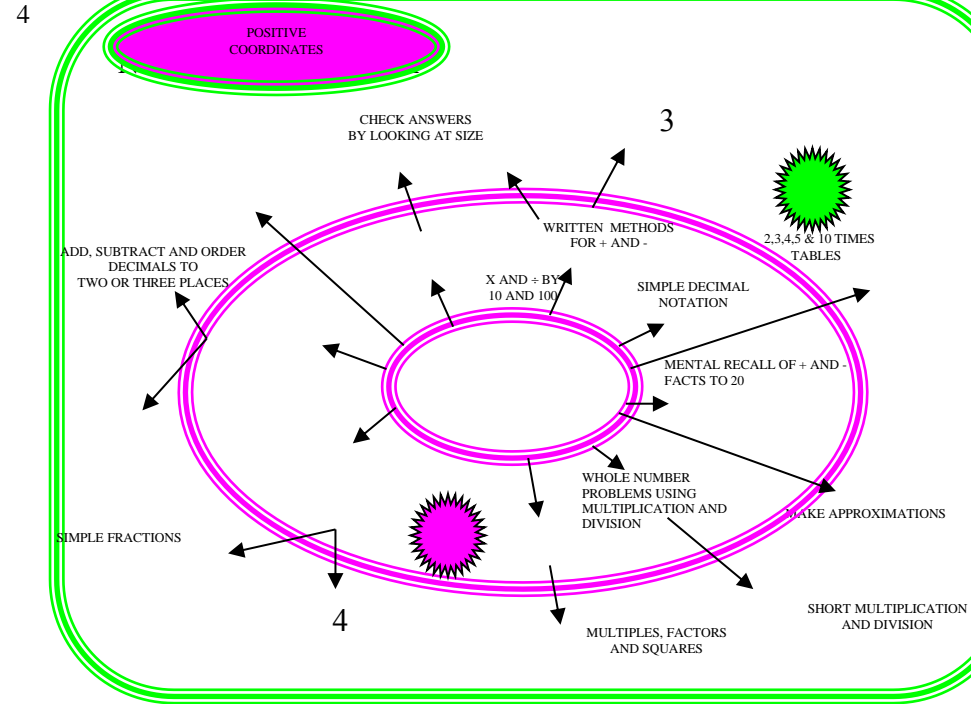
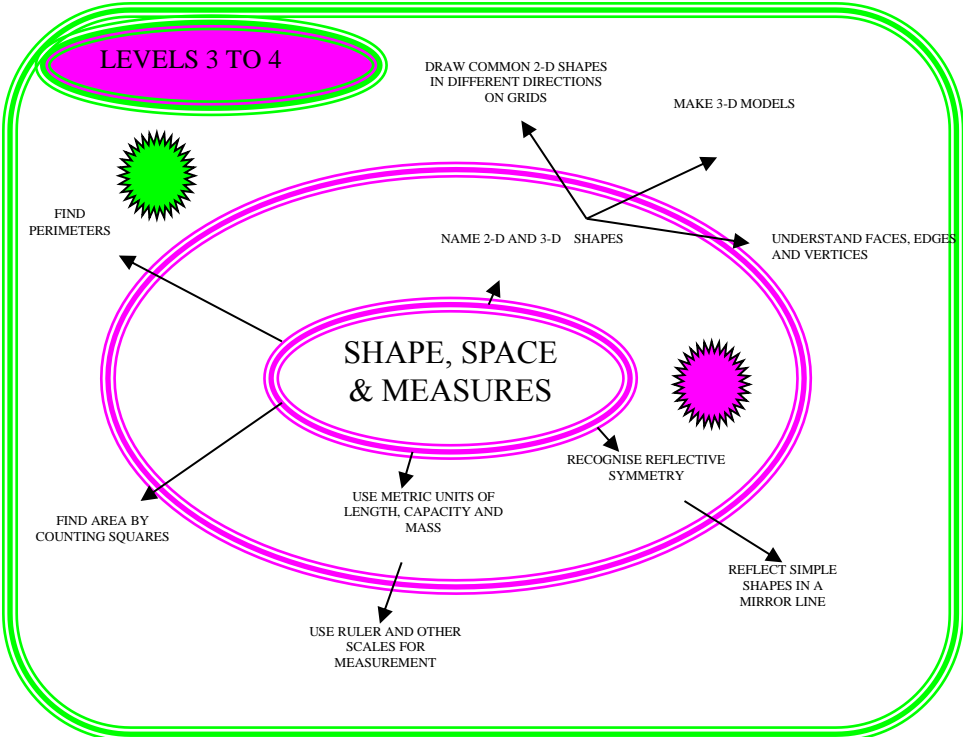
## My Maths

Please see back cover for **MyMaths** tasks

### Parents

Please read note on back cover

MyMaths		Assessment of Students Progress			
	Numbers	Calculating	Algebra	Shape	Data
	Sharing Word Problems Negative Numbers 1 Ordering whole numbers Simple Fractions Money Introduction Counting 3 More Fractions Solving Problems by Rounding Introducing Decimals Decimal Number Lines	Adding in Columns Subtraction Columns Subtraction Lines Adding Number Lines Add single digits Subtract single digits Add 2 digit numbers Multiplying Dividing Number Facts and Doubles 3 Mixed Sums over 100 3 Times Tables 4 Times Tables 6 Times Tables Mixed Tables 3,4,6 Multiplying by 10		Time Between 3D Shapes Measuring Lengths Symmetry Telling the time 1 Telling the time 2	Freq Tables Bar Charts Photograms and Bar Charts Introducing data
LEVELS 3 TO 4	Dividing by 10 and 100 Rounding to 10, 100 Number Lines Complements Fractions to Decimals Improper and Mixed Fractions Frac Dec Perc 1 Factors and Primes Multiples Ratio Introduction Square and Cubes Squares and Triangles Ordering Decimals Decimal Place Value Counting 4 Place Value Hundreds Thousands Simple Equivalent Fractions Estimates with Decimals	Estimating introduction Money Calculations Division Chunking Division Remainders Doubling and Halving Multiply Single Digit Multiply Double Digits Multiplying by 10 and 100 Percentages of Amounts 1 Time Calculations Number Facts and Doubles 4 Sums Using 10s, 100s and 1000s Mixed Sums All Numbers 7 Times Tables 8 Times Tables 9 Times Tables Mixed Tables 7,8,9 11 Times Tables 12 Times Tables Mixed Tables 2 to 12 Money Problems Adding Decimals Mental Adding Decimals in Columns Intro Starting to Multiply Decimals	Coordinates 1 Simple Equations Function Machines Sequences	Area of Rectangles Units of Length Lines and Quadrilaterals Units of Capacity Units of Mass Nets of 3D Shapes Perimeter Lines of Symmetry Rotation Symmetry Time and Timetables Properties of Triangles	Line Graphs Two Way Tables



## ADDITION AND SUBTRACTION I

Name: \_\_\_\_\_

Assessment Criteria: Add and subtract two-digit numbers mentally  
*No calculators allowed!*

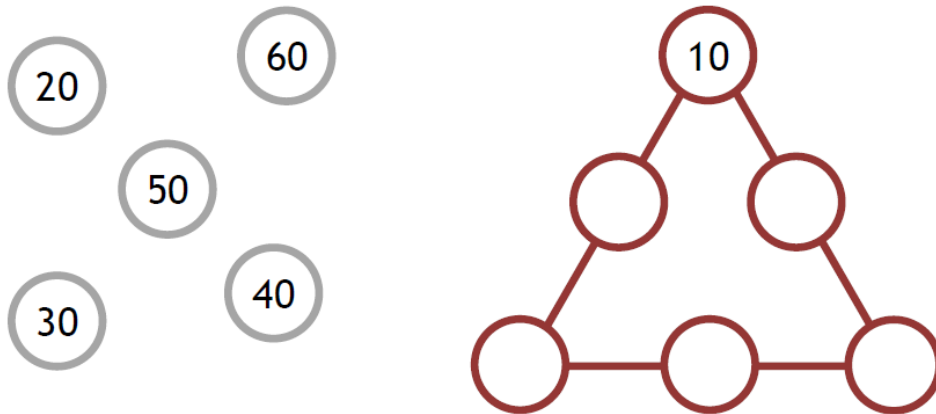
1. Write down two 2-digit numbers with a difference of more than 20

\_\_\_\_\_ and \_\_\_\_\_

2. Explain what is wrong with the following statement:

$$83 - 47 = 44$$

3. Place the numbers 20, 30, 40, 50 and 60 into the circles so that each edge contains three numbers which add up to 90.



4. In a class there are thirty-two children. 19 of the children are girls. How many boys are there?

\_\_\_\_\_

5. Beth has made a bracelet with 23 pink beads and 38 purple beads. How many beads are on the bracelet altogether?

\_\_\_\_\_

6. The table shows the increase in some bus fares:

Old fare	New fare
52p	57p
60p	72p
75p	85p
90p	£1.05
£1.20	£1.28

a) Emily's new bus fare is £1.05. By how much has her bus fare gone up?

\_\_\_\_\_

b) Millie says, "My bus fare has gone up by 10p". How much is her new bus fare?

\_\_\_\_\_

Overall, I think my success level is:

Low      High  
☐ ☐ ☐ ☐

Q	ADDITION AND SUBTRACTION I	😊	☹
	I can add two 2-digit numbers in my head		
	I can subtract two 2-digit numbers in my head		
	I know how to find the difference between two 2-digit numbers		
	<i>I can find a particular example that matches a general statement</i>		
	<i>I can review my work and reasoning</i>		
	<i>I am beginning to organise my work and check results</i>		

I need to practise ...

## ADDITION AND SUBTRACTION II

Name:

Assessment Criteria: Add and subtract three digit numbers using written method*Show your methods clearly!*1. Calculate  $560 + 473$ 

2. Find two 3-digit numbers with a sum of 465

3. Calculate  $842 - 572$ 

4. Find the difference between 324 and 613

5. Find '?' in the calculations below.

$$\begin{array}{r}
 548 \\
 + 7?7 \\
 \hline
 1325
 \end{array}$$

$$\begin{array}{r}
 813 \\
 - 256 \\
 \hline
 55?
 \end{array}$$

Overall, I think my success level is:

Low				High
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q	ADDITION AND SUBTRACTION II	😊	☹
	I can add two 3-digit numbers using an efficient written method		
	I can subtract two 3-digit numbers using an efficient written method		
	I can explain each step when I write addition and subtraction calculations for two 3-digit numbers in columns		
	<i>I can review my work and reasoning</i>		
	<i>I can try different approaches and find ways of overcoming difficulties that arise when I am solving problems</i>		
I need to practise ...			

Name: \_\_\_\_\_

Assessment Criteria: Use mental recall of addition and subtraction facts to 20 in solving problems involving larger numbers.

*No calculators allowed!*

1. Sabrina is playing a game. These are her dominoes so far. The winner is the first person to have exactly 20 dots.

- a) What could her next domino be to ensure she has 20 dots? Find three possible dominoes.

—	—	—



- b) How many different dominoes would allow her to win?

\_\_\_\_\_

2. Draw lines to link each box with the correct answer:

13 + 18
The difference between 68 and 42
The sum of 68 and 42
70 - 49

110
21
26
31

3. Charlie works out  $118 - 103$  in his head without writing it down. Write down the steps you would do to solve this problem.

4. Find a pair of missing values for this problem:

$$11 + \mu = \Upsilon - 3$$

$\mu =$  \_\_\_\_\_

$\Upsilon =$  \_\_\_\_\_

5. Make up a similar problem which uses 17 as one of the missing values

6. Each of the following shapes has a value



= 5



= 19



= ?

The value of the rectangle changes in each of the following addition problems.

In each list of shapes the values are added together. Find the value of the rectangle in each case.

a)



Total 36 so



= \_\_\_\_\_

b)



Total 78 so



= \_\_\_\_\_

c)



Total 124 so



= \_\_\_\_\_

Overall, I think my success level is:

Low High  
☐ ☐ ☐ ☐

Q	ADDITION AND SUBTRACTION III	😊	☹
	I know the addition and subtraction facts with numbers up to 20		
	I can use these facts to solve problems involving larger numbers		
	I can find the sum and difference of two-digit numbers		
	I can write down my method to subtract three-digit numbers		
	<i>I can try different approaches and find ways of overcoming difficulties that arise when I am solving problems</i>		
	<i>I am beginning to use and interpret mathematical symbols and diagrams</i>		
I need to practise ...			



## MULTIPLICATION AND DIVISION I

Name: \_\_\_\_\_

Assessment Criteria: Derive associated division facts from known multiplication facts

1. Five lots of six is thirty, so  $30 \div ? = 6$ .

? = \_\_\_\_\_

2. Write a number in each box to make this correct

$$20 \times 3 = \square = \square \div \square$$

3. Here are 3 numbers:

7	28	4
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Use all three numbers each time to complete the statements:

$$4 \times 7 = 28$$

$$4 \times \square = 28$$

$$28 \div \square = 7$$

$$\square \div \square = 4$$

4. When I doubled a number, the answer was 24 which number did I double?

\_\_\_\_\_

5. Is the following statement true or false? Explain your answer.

*'Multiplying a number by two is the same as halving that number'*

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6.  $? \div 5 = 15$ . Convince me that '?' is 75.

Overall, I think my success level is:

Low High

○ ○ ○ ○

Q	MULTIPLICATION AND DIVISION I	😊	☹
	I know the 2, 3, 4, 5 and 10 times tables		
	I can use multiplication facts to answer division questions		
	If you give me a multiplication fact I can give you one or two division facts to go with it		
	<i>I can use and interpret mathematical symbols</i>		
	<i>I can review my work and reasoning</i>		

I need to practise ...

## MULTIPLICATION AND DIVISION II

Name: \_\_\_\_\_

Assessment Criteria: Multiply and divide two digit numbers by 2, 3, 4 or 5 as well as 10 with whole number answers and remainders

*No calculators allowed!*

1. Calculate the following:

a)  $37 \times 4$

b)  $48 \div 3$

c)  $67 \times 10$

d)  $32 \div 10$

2. Jack multiplied two numbers together. His answer was 160.

Which two numbers could he have multiplied together?

\_\_\_\_\_ and \_\_\_\_\_

3. Sarah says 'When you multiply a number by 10 you just add a nought'.

Do you agree? Explain your answer.

4. Find a number that when divided by 5 gives a remainder of 1

5. Five is a fifth of a number. What is the number?

6. Explain what is wrong with the following statement:

$$19 \div 3 = 6.1$$

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7. Find the missing numbers in the following statement:

$$37 \div \square = 5 \text{ remainder } \square$$

8. Circle the two calculations which have an answer of 5 remainder 2

$$46 \div 5$$

$$17 \div 3$$

$$22 \div 4$$

$$52 \div 8$$

9. There are 27 children in the class.  $\frac{2}{3}$  of them are girls. How many girls is this?

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Overall, I think my success level is:

Low High  
☐ ☐ ☐ ☐

Q	MULTIPLICATION AND DIVISION II	😊	☹
	I can multiply by 2-digit numbers by 2, 3, 4, 5 and 10		
	I can divide by 2-digit numbers by 2, 3, 4, 5 and 10 when the answer is a whole number		
	I can divide by 2-digit numbers by 2, 3, 4, 5 and 10 and find the remainder if there is one		
	I can find simple fractions ( $\frac{1}{2}$ , $\frac{1}{3}$ , $\frac{1}{4}$ , $\frac{1}{5}$ , $\frac{1}{10}$ , $\frac{2}{3}$ , $\frac{3}{4}$ ) of an amount by using division		
	<i>I try different approaches and find ways of overcoming difficulties that arise when I am solving problems</i>		
	<i>I am beginning to organise my work and check results</i>		
	<i>I can select the mathematics I use in a wider range of activities</i>		
I need to practise ...			

## PLACE VALUE

Name:

Assessment Criteria: Understand place value in numbers to 1000

1. Andy says that " $54 \times 10 = 5400$ ". Do you agree with Andy? Explain your answer

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2. Write down three numbers that add together to make 247

\_\_\_\_\_ + \_\_\_\_\_ + \_\_\_\_\_

Write down a different set of three numbers that add together to make 247

Find one more set of three numbers that add together to make 247

3. Karen has used digit cards to make the number 502.

5	0	2
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Write down the number that is ten less than 502.

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Now write down the number that is ten less than this new number.

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Explain what is happening to the number each time

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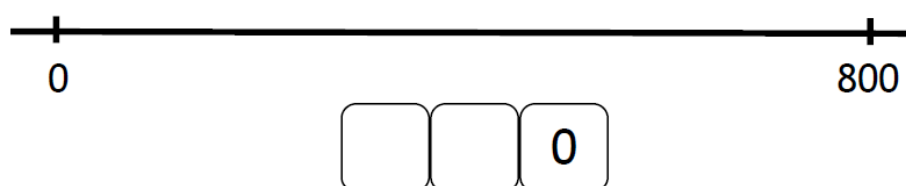
4. Fred puts the following numbers in order, from smallest to largest. What would the third number be?

725, 225, 229, 388, 508

5. Here are four digit cards

2	9	4	7
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Use two of the four digits and place them in the boxes below to make a number that appears **somewhere** along this number line



Find three more answers to this problem

[ ]	[ ]	0	[ ]	[ ]	0	[ ]	[ ]	0
-----	-----	---	-----	-----	---	-----	-----	---

Overall, I think my success level is:

Low High  
☐ ☐ ☐ ☐

Q	PLACE VALUE	😊	☹
	I can use my understanding of place value to multiply whole numbers by 10		
	I can use my understanding of place value to divide whole numbers by 10		
	I know that some numbers can be represented as different arrays		
	I can split a number into hundreds, tens and ones		
	I can read and write numbers to 1000 and put them in order		
	I understand the value of each digit in a three-digit number		
	<i>Use and interpret mathematical symbols and diagrams</i>		
	<i>Understand a general statement by finding particular examples that match it</i>		
	<i>I can review my work and reasoning</i>		

I need to practise ...

## NEGATIVE NUMBERS

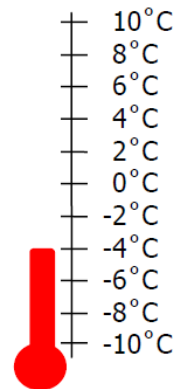
Name: \_\_\_\_\_

Assessment Criteria: Recognise negative numbers in contexts such as temperature

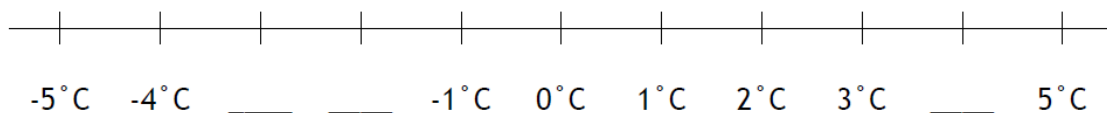
1. Look at the thermometer on the right.

What temperature is shown? Write your answer **in words**.

\_\_\_\_\_



2. Fill in missing temperatures on the number line below:



3. Fill in the three missing numbers in the pattern below:

$$\begin{array}{rcl} 4 & + & 4 = \underline{\quad} \\ 4 & + & 3 = 7 \\ 4 & + & 2 = 6 \\ 4 & + & 1 = 5 \\ 4 & + & 0 = 4 \\ 4 & + & \underline{\quad} = 3 \\ 4 & + & \underline{\quad} = 2 \end{array}$$

4. A watch is waterproof to -50 metres. Explain what this means.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

5. Draw lines to link each of the boxes on the left to the answers:

A temperature colder than $1^{\circ}\text{C}$
A temperature warmer than $-1^{\circ}\text{C}$
A temperature between $-2^{\circ}\text{C}$ and $4^{\circ}\text{C}$
A temperature colder than freezing

$8^{\circ}\text{C}$
$0^{\circ}\text{C}$
$-10^{\circ}\text{C}$
$-3^{\circ}\text{C}$

Overall, I think my success level is:

Low      High  
☐ ☐ ☐ ☐

Q	NEGATIVE NUMBERS	😊	☹
	I can read a temperature scale that includes negative numbers		
	I can count on and back using negative numbers		
	I can find missing numbers in a sequence that includes negative numbers		
	I can interpret negative numbers in a context		
	<i>I can use and interpret mathematical symbols</i>		
	<i>I can find particular examples that match a general statement</i>		

I need to practise ...



## DECIMAL NOTATION

Name: \_\_\_\_\_

Assessment Criteria: Begin to use decimal notation in contexts such as money

1. Write 409 pence in pounds

£ \_\_\_\_\_

2. Write £7.17 in pence

\_\_\_\_\_p

3. Place these high jump results in order, starting with the **shortest**:

1.43 m    1.61 m    1.65 m    1.3 m

\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

4. Write down three numbers that are:

- a) between 1 and 2

\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

- b) between 0.4 and 0.5

\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

5. Convince me that 4.2 is halfway between 3.9 and 4.5

6. Bryony works out the total price of a notebook costing £1.45 and a pack of pens costing £2.15. Her calculator gives the answer 3.6

Bryony tells her mum that she would like to buy the notebook and pens, and that she needs £3.6 from her savings.

Do you agree with Bryony? Explain your answer.

7. Clayton and Flo buy some popcorn that costs £1.50.  
Flo pays £1.00 more than her brother. How much did they pay each?
8. Which one of the following statements is **false**. Explain your answer.

A : 4.5 m = 450 cm

B : 86 cm more than  
4.25 m is 5.01 m

C : Half-way between  
£3.50 and 650p is  
£4

D : £7.20 = 720p

Overall, I think my success level is:

Low High  
○ ○ ○ ○

Q	DECIMAL NOTATION	😊	☹
	I can write an amount such as 'four metres and twenty-three centimetres' using decimal notation		
	I can write an amount such as 'three pounds sixty' or 'two pounds nine pence' using decimal notation		
	I can order numbers written in decimal notation		
	I can solve problems involving numbers written in decimal notation		
	<i>I can find particular examples that match a general statement</i>		
	<i>I can select the mathematics I use in a wider range of classroom activities</i>		
I need to practise ...			

## NUMBER PROBLEMS

Name: \_\_\_\_\_

Assessment Criteria: Solve whole number problems including those involving multiplication or division that may give rise to remainders

1. What type of calculation would you use to solve each of these problems?

Eleven days ago, Barney the rabbit was 120 days old. How many days old is he now?	Peaches are sold in packs of four. I need to buy 16 peaches. How many packs must I buy?
Four brothers share out a box of 48 chocolates. How many stickers do they each get?	53 children were on a school bus. 34 were boys. How many were girls?
Eric saves 80p each week for 6 weeks. How much money will she save altogether?	Desmond had a 96 cm length of wood. He cut it into two pieces. One piece was 19 cm long. How long was the other piece?

Choose from the following, and write your answer in the table above

$+$ <i>add</i>	$-$ <i>subtract</i>	$\times$ <i>multiply</i>	$\div$ <i>divide</i>
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2. Jack buys butter for 37p and flour for 48p. He pays for them with a £1 coin. Jack calculates that he should receive 25p change.

Do you agree with Jack? Explain your answer.

3. Is the following statement always true, sometimes true or never true?

*'When you divide an even number by 3, you will always have a remainder'*

Explain your answer

4. a) Convince me that the number half-way between 12 and 40 is 26.

b) Use your strategy to calculate the number half-way between 23 and 51.

5. Use each of the calculations to complete the number sentences:

$$\frac{1}{2} \text{ of } 40 \quad \frac{1}{3} \text{ of } 27 \quad \frac{1}{3} \text{ of } 60 \quad \frac{1}{4} \text{ of } 24 \quad \frac{1}{5} \text{ of } 45 \quad \frac{1}{10} \text{ of } 60$$

\_\_\_\_\_ > \_\_\_\_\_

\_\_\_\_\_ < \_\_\_\_\_

\_\_\_\_\_ = \_\_\_\_\_

6. Clayton and Flo buy some popcorn that costs 75p. Flo pays twice as much money as Clayton.

How much did they pay each?

Flo: \_\_\_\_\_

Clayton: \_\_\_\_\_

7. 47 children need to sit on benches for lunch. Five children can sit on each bench. How many benches are needed? Explain your answer.

Overall, I think my success level is:

Low High  
○ ○ ○ ○

Q	NUMBER PROBLEMS	😊	☹
	I can identify the correct operation to use in a problem		
	I can solve whole number problems that involve division		
	I can solve whole number problems that give rise to remainders		
	I can work out how to solve problems with one or two steps		
	I can solve problems that involve money and measures		
	<i>I can try different approaches, and find ways of overcoming difficulties, when I am solving problems</i>		
	<i>I can organise my work and check results</i>		
I need to practise ...			

## SEQUENCES

Name: \_\_\_\_\_

Assessment Criteria: Recognise a wider range of sequences

1. What is the same and what is different about these two number sequences?

3, 9, 15, 21, ...

23, 17, 11, 5, ...

Same: \_\_\_\_\_

Different: \_\_\_\_\_

2. Complete the following sequence using the information given:

..., \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, 17, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, ...

- The sequence is increasing (it is a 'counting up' sequence)
- The difference between each term and the next term is 4

3. Convince me that the number 12 will be in this sequence if it is continued.

..., 72, 67, 62, 57, 52, 47, ...

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4. Is the following statement always true, sometimes true or never true?

*'A decreasing (or 'counting down') sequence will always have a zero in it'*

Explain your answer

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5. These two sequences have the same rule. Work out the missing numbers.

..., 3, \_\_\_\_\_, 13, ...

..., 21, \_\_\_\_\_, \_\_\_\_\_, 36, ...

6. Match each sequence to its term-to-term rule.

Fill in the missing numbers and complete the empty cells.

Sequence
80, ____, 20, 10, 5, ...
23, 25, 27, ____, ____, ...
2, 4, 8, 16, ____, 64, ...

Term-to-term rule
Add 2
Multiply by 2
Subtract 5

Overall, I think my success level is:

Low      High  
☐ ☐ ☐ ☐

Q	SEQUENCES	😊	☹
	I can recognise and continue number sequences formed by counting on or back in steps of constant size		
	I can work out the rule for a given number sequence		
	I can work out missing numbers in a sequence		
	I can reason about numbers which will/will not be in a number sequence		
	<i>I can try different approaches and find ways of overcoming difficulties that arise when I am solving problems</i>		
	<i>I can begin to organise my work and check results</i>		
	<i>I can review my work and reasoning</i>		

I need to practise ...

**Task 11**

Complete this homework on the sheet. Show your working out

1	Write in figures the number one thousand and twenty.	
2	Divide ninety by three.	
3	Multiply seven by six.	
4	What is twenty out of forty	
5	How many grams are there in twelve kilograms?	
6	How much must I add to four pounds ninety to make six pounds?	
7	How many lines of symmetry does a rectangle have?	
8	What is three times three added to four times four?	
9	Subtract one point nine from two point seven.	
10	What is one-half added to three-quarters?	
11	Calculate the perimeter of a rectangle which is eleven metres long and four metres wide.	
12	How many forties are there in eight hundred?	
13	If $C = 5h - 2$ , calculate C when $h = 12$	
14	Which decimal is equal to one-fifth: 0.1, 0.2, 0.3, 0.4 or 0.5	
15	What is three-quarters of five hundred?	
16	What number is thirty-four more than fifty-eight?	
17	In a takeaway the prices of pizzas are: Small £6.50, Medium £7.50, Large £8.40. How much more does a large pizza cost than a small one?	
18	What is fifteen multiplied by eleven?	
19	A yogurt costs forty-five pence.  How many yogurts can be bought for five pounds?	
20	What is the angle between the hands of a clock at four o'clock?	

## MyMaths : Here are the MyMaths tasks for level 3.

HANDLING  
DATA

Your teacher will instruct which of these to do.

Alternatively can use MyMaths to help with topics you are unsure of and to revise topics.

### BOOSTER PACKS

Topic	<i>How to find</i> : Go to <b>Boosters</b> then	% Scored	Self Assessment		
Number, Counting	Three Boosters		😊	😐	😞
Special Numbers	Three Boosters		😊	😐	😞
Add and Subtract	Three Boosters		😊	😐	😞
Multiply and Divide	Three Boosters		😊	😐	😞

### OTHER

☐ ☐ ☐

Topic	<i>How to find</i> : Go to <b>Library</b> then	% Scored	Self Assessment		
Number Facts and Doubles 3	Number → Add subtract mental		😊	😐	😞
Add single digits	Number → Add subtract mental		😊	😐	😞
Subtract single digits	Number → Add subtract mental		😊	😐	😞
Adding Number Lines	Number → Add subtract mental		😊	😐	😞
Subtraction Lines	Number → Add subtract mental		😊	😐	😞
Add 2 digit numbers	Number → Add subtract mental		😊	😐	😞
Mixed Sums over 100	Number → Add subtract mental		😊	😐	😞
Adding in Columns	Number → Add subtract written		😊	😐	😞
Subtraction Columns	Number → Add subtract written		😊	😐	😞
Counting 3	Number → Counting and Place Value		😊	😐	😞
Ordering Whole Numbers	Number → Counting and Place Value		😊	😐	😞
Negative Numbers 1	Number → Counting and Place Value		😊	😐	😞
Introducing Decimals	Number → Decimals		😊	😐	😞
Decimal Number Lines Intro	Number → Decimals		😊	😐	😞
Solving Problems by Rounding	Number → Estimating and Accuracy		😊	😐	😞
Introducing money	Number → Money and Finance		😊	😐	😞
Mixed Tables 3,4,6	Number → Multiply divide mental		😊	😐	😞
Multiplying	Number → Multiply divide mental		😊	😐	😞
Multiplying by 10	Number → Multiply divide mental		😊	😐	😞
Dividing	Number → Multiply divide mental		😊	😐	😞
3 Times Tables	Number → Multiply divide mental		😊	😐	😞
4 Times Tables	Number → Multiply divide mental		😊	😐	😞
6 Times Tables	Number → Multiply divide mental		😊	😐	😞
Sharing	Number → Multiply divide mental		😊	😐	😞
Word problems	Number → Multiply divide written		😊	😐	😞

### Parent note about this booklet

This booklet contains several level tasks available for homework along with MyMaths tasks.

The teacher will instruct which level tasks students should complete each week.

Students can do extra MyMaths tasks not set by the teacher at any time It is not intended that the whole booklet should be completed as one homework.

The booklet must be kept safely and any lost booklets will require £1 for a new copy.