

## Modelling

HTO + HTO  
351 + 437

$$\begin{array}{r} 300 + 50 + 1 \\ 400 + 30 + 7 \\ \hline 700 + 80 + 8 = 788 \end{array}$$

<p>1</p> $\begin{array}{r} 7349 \\ +6785 \\ \hline \end{array}$ <p>Place the numbers one on top of the other, lining up the thousands, hundreds, tens and ones.</p>	<p>2</p> $\begin{array}{r} 7349 \\ +6785 \\ \hline 4 \end{array}$ <p>Add the ones and write the answer.</p>	<p>3</p> $\begin{array}{r} 7349 \\ +6785 \\ \hline 4 \\ \hline 1 \end{array}$ <p>Carry any tens under the tens column.</p>	
<p>4</p> $\begin{array}{r} 7349 \\ +6785 \\ \hline 34 \\ \hline 1 \end{array}$ <p>Add the tens including any tens you have regrouped. Carry any hundreds under the hundreds column.</p>	<p>5</p> $\begin{array}{r} 7349 \\ +6785 \\ \hline 134 \\ \hline 1 \end{array}$ <p>Add the hundreds including any hundreds you have regrouped.</p>	<p>6</p> $\begin{array}{r} 7349 \\ +6785 \\ \hline 14134 \\ \hline 111 \end{array}$ <p>Add the thousands including any thousands you have regrouped.</p>	<p>7</p> $\begin{array}{r} 7349 \\ +6785 \\ \hline 14134 \\ \hline 111 \end{array}$ <p>Check your answer.</p>

## Main Task

Solve these problems using a method from above.  
Record your working in the square grid below.

1.  $269 + 625 =$       2.  $364 + 521 =$       3.  $645 + 476 =$   
4.  $6720 + 3285 =$       5.  $3845 + 5428 =$       6.  $7637 + 2454 =$


## Challenge

Work out the missing digits.

a)

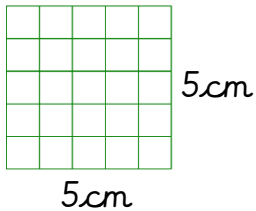
		Th	H	T	O
		3	7		9
	+			8	
		6	9	2	5

b)

		Th	H	T	O
				8	1
	+		9	8	
		4	2		8

## Modelling

The area is the inside of a 2D shape. We work out the area of a square or rectangle by multiplying the length by the width of a shape.

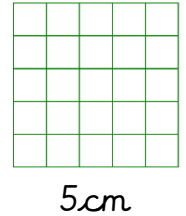


$$\begin{aligned} \text{Area} &= l \times w \\ 5 \text{ cm} \times 5 \text{ cm} \\ &= 25 \text{ cm}^2 \end{aligned}$$

## Modelling

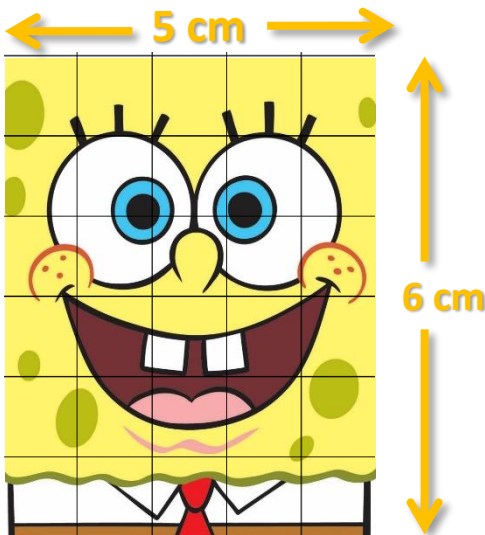
The perimeter is the distance around the edge of a 2D shape. We work out the perimeter of a square or rectangle by adding all of the lengths and widths together.

$$\begin{aligned} \text{Perimeter} &= \\ l + l + w + w & \quad 5 \text{ cm} \\ 5 \text{ cm} + 5 \text{ cm} + 5 \text{ cm} + 5 \text{ cm} \\ &= 20 \text{ cm} \end{aligned}$$



## Main Task

Find the area and the perimeter of the two shapes below:



Area = \_\_\_\_\_  $\text{cm}^2$   
Perimeter = \_\_\_\_\_  $\text{cm}$



Area = \_\_\_\_\_  $\text{cm}^2$   
Perimeter = \_\_\_\_\_  $\text{cm}$

## Challenge

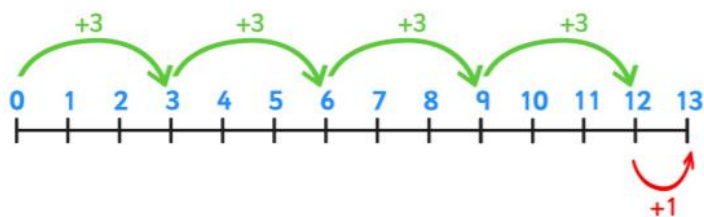
Find the area and perimeter of 5 objects in your house or garden. Write them into a table like the one below. What do you notice about the perimeter and the area of each shape?

Object	Area	Perimeter

## Modelling

### Method 1 - Repeated Addition

$$13 \div 3 = 4 \text{ r}1$$



Draw a number line starting with 0.  
and ones.

Count on in 3s getting as close to 13 as you can.

Count your hops to get the answer.

Any left over is remainder.

### Method 2 - Partitioning

$$84 \div 4$$

$$80 \div 4 = 20$$

$$4 \div 4 = 1$$

$$\underline{21}$$

Partition the number into tens

Divide the tens and ones.

Combine your totals.

$$84 \div 4 = 21$$

## Main Task

Solve these problems using a method from above.

Record your working in the square grid below.

1.  $42 \div 3 =$

2.  $64 \div 5 =$

3.  $96 \div 6 =$

4.  $100 \div 8 =$

5.  $120 \div 9 =$

6.  $110 \div 7 =$


## Challenge

John is saving to buy a new bike.

He saves £4 per week.

The bike cost £128.

How many weeks will he have to save money to buy the bike?



### Modelling

“If you multiply or divide the **numerator** and **denominator** by the **same number** you will get an **equivalent fraction**.”

$$\frac{2}{3} = \frac{6}{9}$$

x3  
x3

$$\frac{10}{25} = \frac{2}{5}$$

÷5  
÷5

### Main Task

Draw straight lines to connect pairs of equivalent fractions.

$$\frac{1}{2}$$

$$\frac{30}{50}$$

$$\frac{3}{5}$$

$$\frac{12}{30}$$

$$\frac{2}{3}$$

$$\frac{4}{6}$$

$$\frac{3}{4}$$

$$\frac{4}{8}$$

$$\frac{4}{10}$$

$$\frac{15}{20}$$

### Challenge

Find something in your house or garden that you have lots of. It might be Lego bricks or you could go and find stones in the garden.

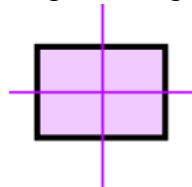
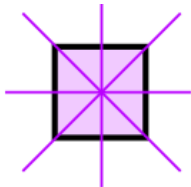
Divide them into two piles so you have made a fraction. For example, 6 stones in one pile and 10 in another pile would give you a fraction of  $\frac{6}{10}$ .

How many equivalent fractions can you make? Send in your photos of your real-life equivalent fractions

## Modelling

A line of symmetry is an imaginary line that you could fold along and both sides would match exactly. It is sometimes called a reflection line. Some shapes have more than one line of symmetry like the example below.

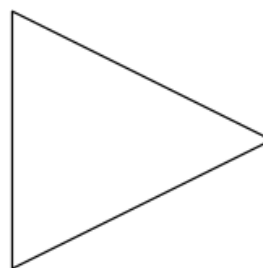
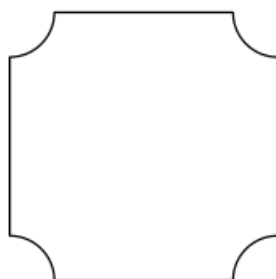
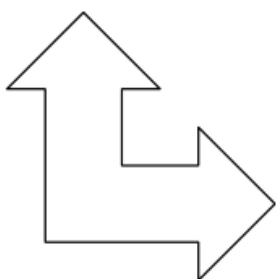
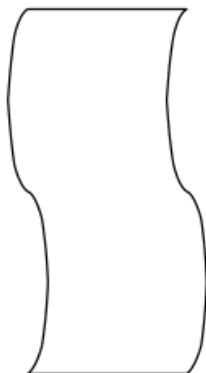
Square  
4 lines of symmetry



Rectangle  
2 lines of symmetry

## Main Task

Draw the lines of symmetry on each of these shapes. If you are struggling, use a mirror to help you.



## Challenge

Draw a shape with as many lines of symmetry as possible. What type of shape is it? How many lines of symmetry does it have?

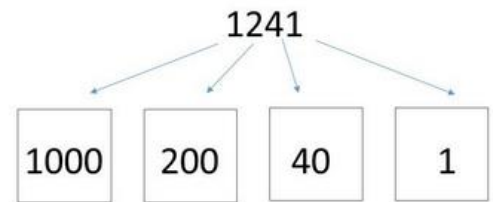
Send in pictures of your shapes with your lines of symmetry.



## Modelling

<p>Written Form</p> <p>two thousand three hundred and seventy-five</p>	<p>Numerical (Standard) Form</p> <p>2375</p>
<p>Expanded Form</p> <p>2000 + 300 + 70 + 5</p>	<p>Model Form</p>

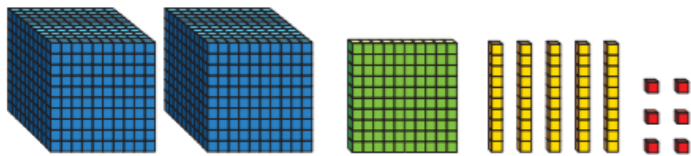
Partition 4 digit numbers



## Main Task

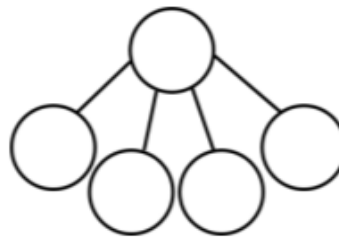
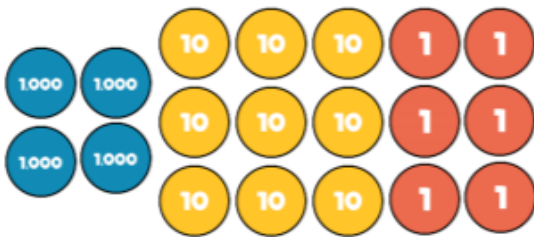
Complete the number sentences.

a)



$$2,156 = 2,000 + \boxed{\phantom{000}} + \boxed{\phantom{00}} + \boxed{\phantom{0}}$$

Represent the number in two different ways in a part-whole model.



What is the value of the underlined digit in each number?

6,983

9,021

789

6,570

## Challenge

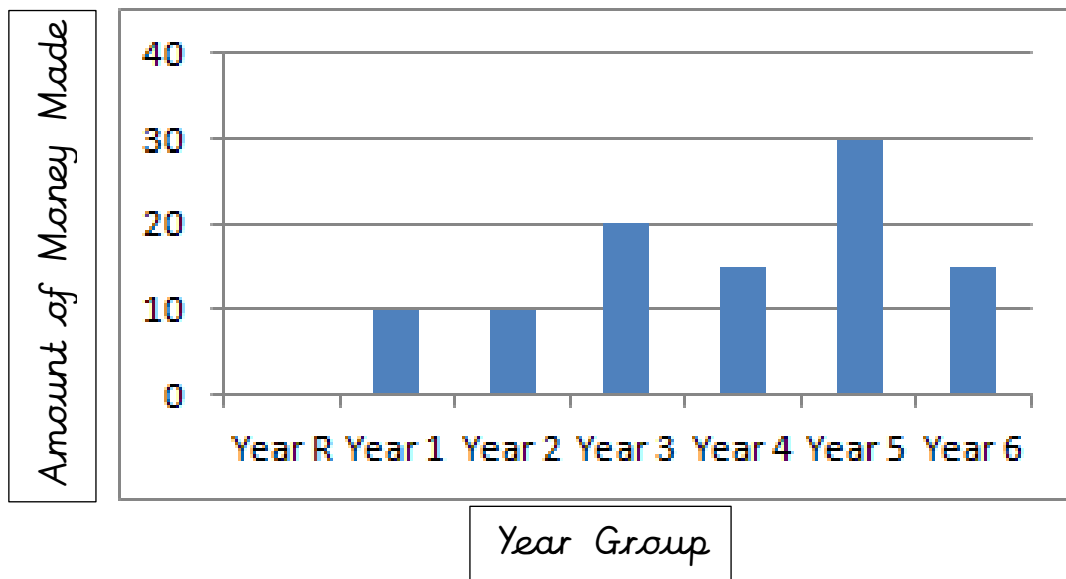
Create four 4-digit numbers to fit the following rules:

- The tens digit is 3
- The hundreds digit is two more than the ones digit
- The four digits have a total of 12

## Modelling

A bar chart is a way of showing information from a set of data. For example, we can use it to show a classes favourite subject. The number of children would be the y axis (along the side) and then the subjects would be the x axis (along the bottom).

## Main Task



1. Write the amount of money each year group made above the year groups bar.
2. Which year group raised the most amount of money? \_\_\_\_\_
3. Which year group raised the least amount of money? \_\_\_\_\_
4. How much more money did year 3 raise than year 4? \_\_\_\_\_

## Challenge

Collect some data from the people you live with. You may even be able to call your friends or family members to ask them too. When you have collected your answers, turn it into a bar chart.

We would love to see your brilliant bar charts so send them in!



## Modelling


Use different ways to subtract 3-digit numbers.

**403 - 267**

If the larger number is close to a multiple of 100, it might be most efficient to find the difference by counting up. Use a number line jotting to keep track of Frog's hops...

Add the jumps!  
 $103 + 30 + 3 = 136$

Frog jumps 3 to 270...  
... and then 30 to 300...  
... then 103 to 403.



Use different ways to subtract 3-digit numbers.

We can use expanded or compact column subtraction to work out  $722 - 347$ .

For both methods it is important to set out the numbers neatly in columns.

This time we had to make two moves!

$$\begin{array}{r} 110 \\ 600 \cancel{10} \cancel{12} \\ - 300 \cancel{40} \cancel{7} \\ \hline 300 \quad 70 \quad 5 \end{array}$$

$722 - 347 = 375$

$$\begin{array}{r} 11 \\ 6 \cancel{12} \\ - 3 \cancel{4} \cancel{7} \\ \hline 3 \quad 7 \quad 5 \end{array}$$

### Main Task

Solve these problems using a method from above.  
Record your working in the square grid below.

2.  $879 - 725 =$

2.  $964 - 521 =$

3.  $645 - 276 =$

5.  $2720 - 685 =$

5.  $845 - 428 =$

6.  $637 - 454 =$


### Challenge

Use these digits to create two different 4-digit numbers:

4            1            6            8

Subtract the smaller from the larger.

Repeat this.

Will your answer always be an even number?

Justify your opinion.


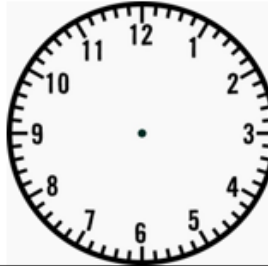

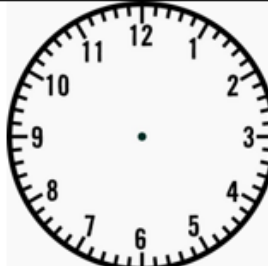
## Modelling

To convert from digital to analogue we need to learn and remember our time conversions.

Digital	Analogue	Digital	Analogue	Digital	Analogue
00:00	12:00am	08:00	8:00am	16:00	4:00pm
01:00	01:00am	09:00	9:00am	17:00	5:00pm
02:00	02:00am	10:00	10:00am	18:00	6:00pm
03:00	03:00am	11:00	11:00am	19:00	7:00pm
04:00	04:00am	12:00	12:00pm	20:00	8:00pm
05:00	05:00am	13:00	1:00pm	21:00	9:00pm
06:00	06:00am	14:00	2:00pm	22:00	10:00pm
07:00	07:00am	15:00	3:00pm	23:00	11:00pm

## Main Task

Draw these digital times as they would appear on an analogue clock.

	
02:30	10:20
	
16:10	03:15

## Challenge

Write a list of events that took place one day this week. For example, Wake up at 07:00. Breakfast 08:15 etc.

When you write your timings, show them in digital and analogue.