Home Learning – Maths

Timestables:

Children should practise their times tables daily.

Using the following link, you can create a 'times tables' practice sheet.

http://www.timestables.me.uk/printable-pdf-quiz-generator.htm

Children should practise their **8** times tables this week (including the 'divide by' questions). In class, we use sheets that are 40 questions long. You may want to print these out. Alternatively, you could write up questions or work through them verbally.

Monday:

Known facts

How many addition and subtraction calculations can you show with seven cubes?

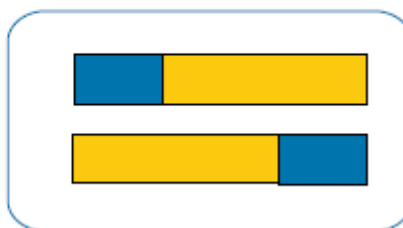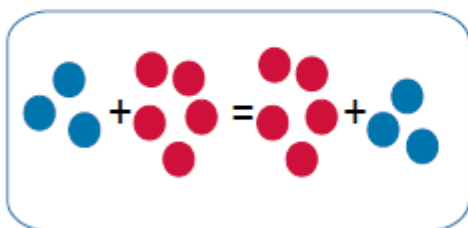
$$7 = 7 + 0$$
$$7 - 0 = 7$$

$$7 - 3 = 4$$
$$3 = 7 - 4$$

$$7 = 3 + 2 + 2$$
$$2 + 2 + 3 = 7$$

Don't forget, you can use commutativity and the inverse to come up with more number facts.

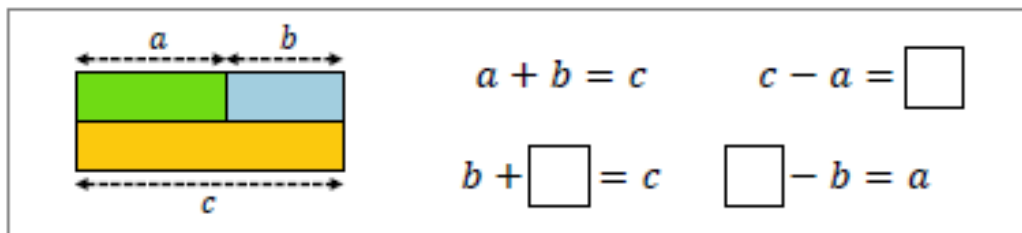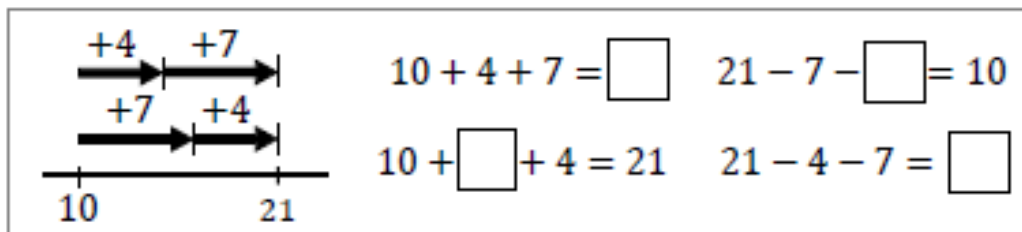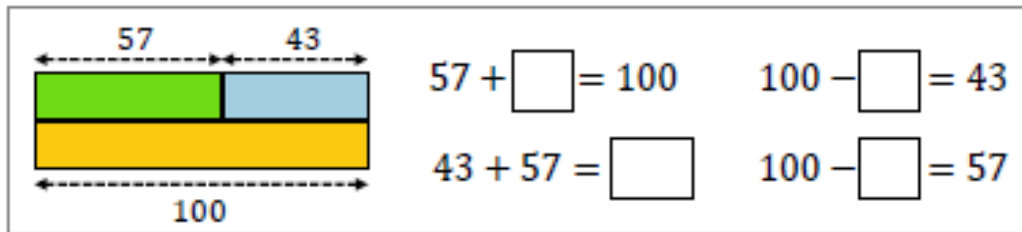Explain how each model shows that addition is commutative

You will firstly need to explain what commutativity is, and then explain how the two models above show that addition is commutative.

Varied representations

Draw the representation into your books and then complete the 4 accompanying calculations.

57   43

$57 + \boxed{} = 100$ $100 - \boxed{} = 43$

$43 + 57 = \boxed{}$ $100 - \boxed{} = 57$

100

$+4$ $+7$

$+7$ $+4$

10   21

$10 + 4 + 7 = \boxed{}$ $21 - 7 - \boxed{} = 10$

$10 + \boxed{} + 4 = 21$ $21 - 4 - 7 = \boxed{}$

a b

c

$a + b = c$ $c - a = \boxed{}$

$b + \boxed{} = c$ $\boxed{} - b = a$

Use sentences to explain your reasoning.

'Mr Darrock says "If I know that 3+4=7, I can rearrange the numbers to any position to create correct number sentences".

Here are some examples:

$3 + 4 = 7$	$4 + 3 = 7$	$7 + 3 = 4$
$3 + 7 = 4$	$4 + 7 = 3$	$7 + 4 = 3$
$3 - 4 = 7$	$4 - 3 = 7$	$7 - 3 = 4$
$3 - 7 = 4$	$4 - 7 = 3$	$7 - 4 = 3$

Is Mr Darrock correct? Explain your reasoning using sentences and any representations you can think of (bar models, part whole, place value counters, dienes etc.).

If you think Mr Darrock has made a mistake, can you adapt his sentence to create a statement that is always true?

Using Key facts:

1) Complete the calculation to show how a key fact can be used:

$$4 + 5 = \boxed{} \qquad\qquad \boxed{} + 4 = 9$$

$$\boxed{} + 5 = 19 \qquad\qquad \boxed{} + 40 = 90$$

$$29 - 5 = \boxed{} \qquad\qquad 900 - 400 = \boxed{}$$

$$\boxed{} - 4 = 75 \qquad\qquad 9000 - \boxed{} = 4000$$

2) Now use the key fact 6 + 2 = 8. If I know this, what else do I know?

Remember to think about: commutativity, the inverse, doubles and halves, adding tens, using multiples of 10 etc. There are examples from the first question that you could adapt, but I'm sure you can think of many more!

3) Using the numbers below, you must add 4 numbers together to answer the following questions in your work books.
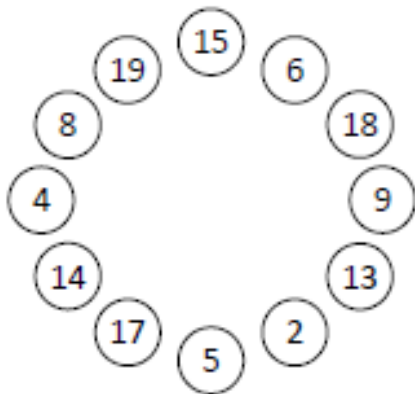
A- What is the largest number you can make? How do you know it is the largest number? Prove it using full sentences and any models you want to.

B- What is the smallest number you can make? How do you know it is the largest number? Prove it using full sentences and any models you want to.

C- How many different odd numbers can you make?

D- How many different even numbers can you make?

Bar Model Problems

For the following word problems, you must identify the either the parts or the whole, draw a bar model to show this and then solve the calculation. Finally, you must write a sentence to answer the question.

Here is an example. I would like you to do each of these steps for every question please.

> John has three marbles.
> Altogether John and his
> brother have 11 marbles.
> How many does John's
> brother have?

I know that the whole is 11 marbles.

I know my known part is 3 marbles.

3	?
11	
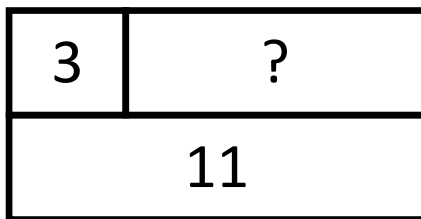
To find the unknown part I must do my whole subtract my unknown part.

I must do 11 subtract 3.

11 – 3 = 8.

John's brother has 8 marbles.

Here are your questions:

> John has three marbles.
> His brother gives him four more.
> How many does John have?

> John has three marbles more than his brother.
> His brother has 11 marbles.
> How many does John have?

> John has three marbles more than his brother.
> Altogether they have 11 marbles.
> How many does John have?

> John has three marbles
> His brother has 8 marbles.
> How many do they have altogether?

Problem solving:

The numbers below show the weights of different suitcases. The suitcases get packed onto trolleys before they can go onto the aeroplane. No crate can weigh more than 100kg.

65 kg	13 kg	19 kg
53 kg	22 kg	16 kg
48 kg	9 kg	27 kg
39 kg	35 kg	26 kg
18 kg	6 kg	

For example, this trolley can go on the plane because it weighs less than 100kg altogether:

65 kg   27kg

6kg
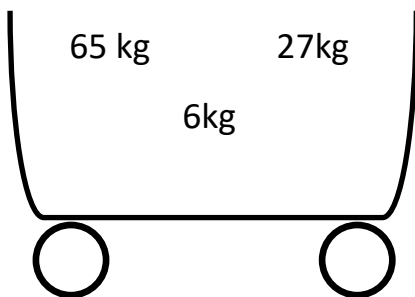
Your challenge is to get everybody's suitcases on to the plane. There is more than one way to do it. I want you to try and find the way that you could do it using the fewest number of trolleys.