Developing Mathematical proficiency

Mrs Malik and Mr Payne

Warm up activity

How much maths have you used today?

Share with the person next to you how much maths you have used today.

What would world without mathematics be like?

Imagine a world without……

Money, maps, medicine, weather forecasts, speed limits, and a whole lot more!

So much of what we take for granted would be impossible without mathematics.

Aims

- To understand the key knowledge, skills and understanding that children need to be competent in mental and written calculation
- To be aware of the key strategies for each operation
- To understand how you can support your child at home

Rationale

Level 1 is the average for a typical 5 year old

Level 2 is the average for a typical 7 year old

Level 3 is the average for a typical 9 year old

Level 4 is the average for a typical 11 year old

Level 5 is the average for a average 13 year old

Level 6 is the average for a typical 14 year old

Level 7 is above average for a typical 14 year old

At INA

By the end of year 7, students should be at least a level 4a

By the end of year 8, students should be at least a level 5a

Students are expected to make one level of progress (3 sub levels) each year

20 x 3　　12 x 7　　56 ÷ 8

120 ÷ 4　　50% of 124

- How did you work these out? Explain to your partner.

- What do you need to understand and be able to do to carry out these calculations?

Knowledge, skills and understanding (KSU)

- Understand the symbol
- **Use multiplication and division facts**
- Make jottings to help carry out the calculations mentally
- Doubling
- Halving
- Relationships between fractions and percentages
- **Partitioning**

KSU you can help develop

- Practise multiplication and division facts until your child knows they by heart
- Help your child learn and tell the time in both analogue and 24 hour
- Use shopping trips to practise mental calculations for the four operations
- When cooking get your child to measure and weigh out the ingredients

The aim is for students to be able to select and use an efficient method for each operation

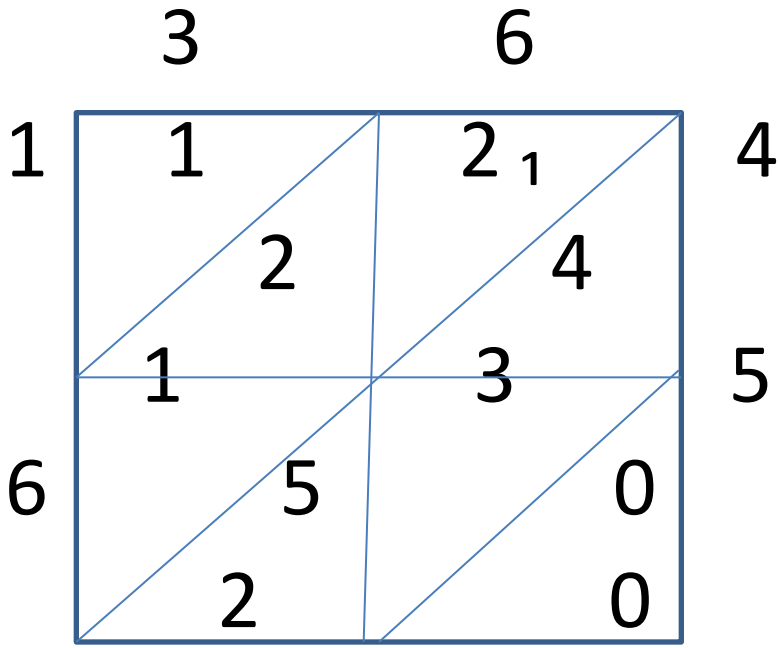
They will do this by asking themselves:

- Can I do this in my head?
- Can I do this in my head and use drawings or jottings to help me?
- Do I need to use a written method?
- Do I need to use a calculator?

Multiplication

The lattice method

36 x 45 = 1620

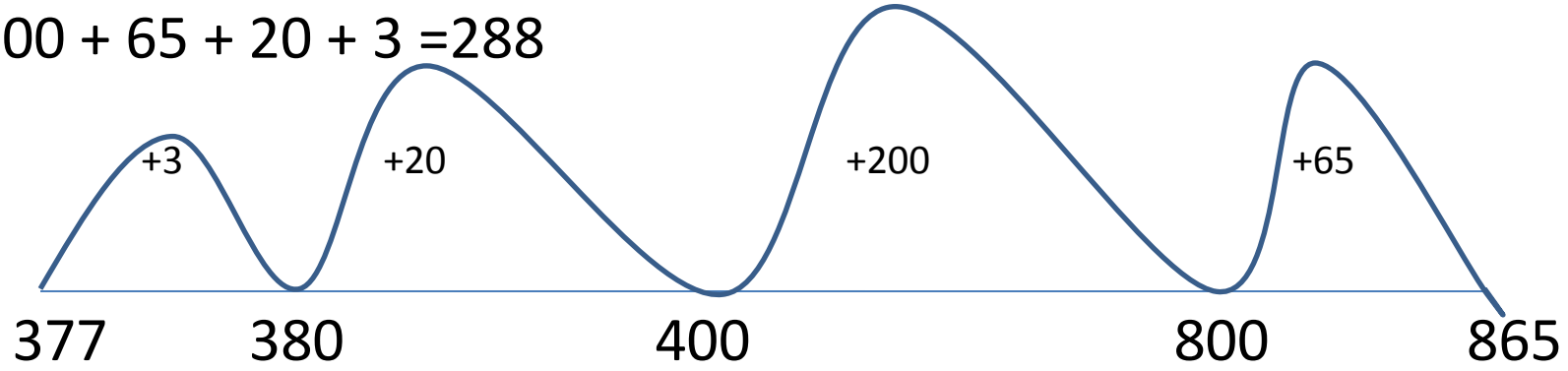


Subtraction

Finding the difference (counting up) using a blank numberline

865 – 377

200 + 65 + 20 + 3 =288



Division

Short division/bus stop method

Addition

Column addition

Any questions?