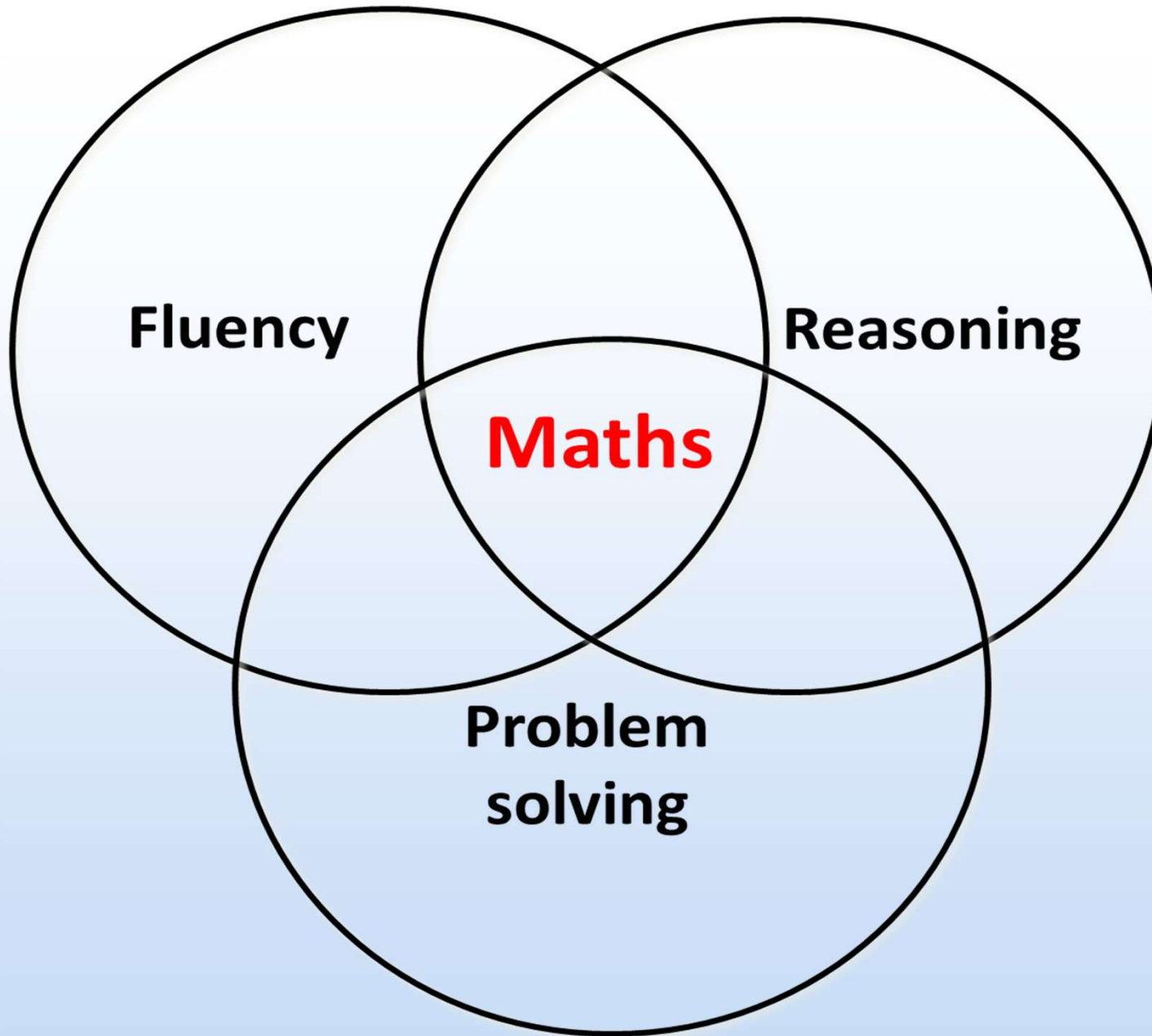


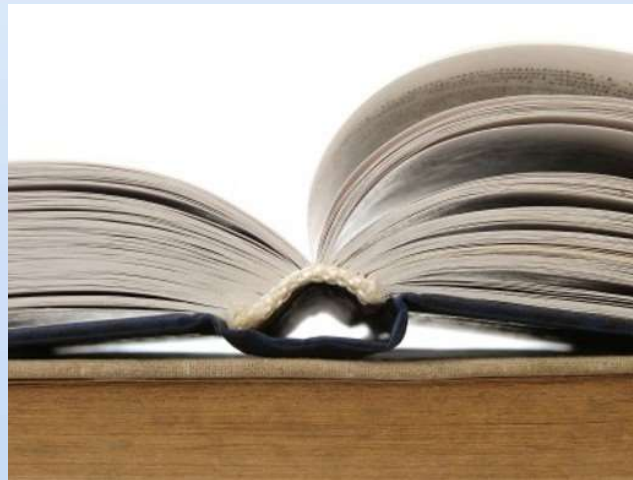
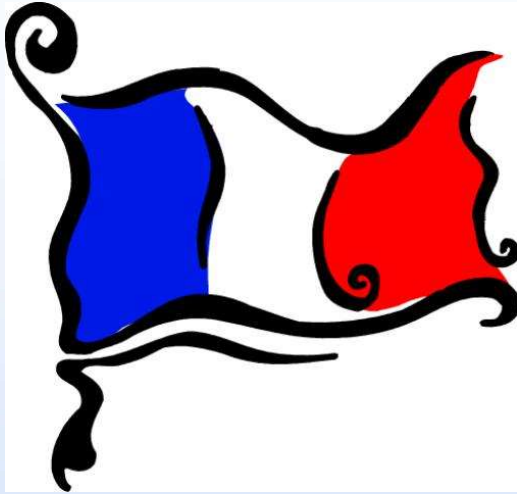


# Maths – The New Curriculum

12/14/2017



# What is fluency?



# Fluency in the National Curriculum

*become fluent in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and are able to recall and apply their knowledge rapidly and accurately*

# What is Fluency?

- A child knows all their multiplication (how many different ways can we use them)
- How can we link multiplication and division?
- Tables up to  $12 \times 12$
- Asked what is  $13 \times 4$  a child looks blank
- Does this represent fluency? It's not just to know it – it's to understand and be able to apply this in a variety of contexts
- What is missing?
- It enables children to apply

# Fluency Involves

- Quick (or does it)? recall of facts and procedures
- Speed can put some children off?
- And just because your quick – does that mean you're fluent?
- The flexibility and fluidity to move between different contexts and representations of mathematics.
- The ability to recognise relationships and make connections in mathematics
- The actual understanding of what a number is and how you can play about with number



# What Fluency isn't!

- It's not just about speed
- It's not just about rote learning
- It's about **CONCEPTUAL UNDERSTANDING** – if I know  $3 \times 4 = 12$  what else do you know and how else can you apply it



# How fluent are you at solving these?

- $8 + 4 = ? + 5$
- $68 - ? = 59 - 38$
- $48 \times 2.5 = ? \times 25$
- $39 \div 3 = 3.9 \div ?$





# What does Fluency at Sacred Heart look like?

Mental Starter to focus on:

- Counting Activities
- Times-Tables
- Known Facts
- Number Bonds

PA

# Mathematically resourceful

- Fluency
  - More than ‘knowing by heart’
- Strategies
  - Flexible approaches (v procedures)
- Understanding
  - Develops over time
- Problem solving
  - Requires meaning making

