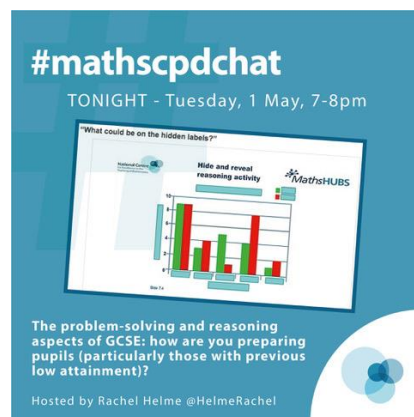


#mathscpdchat 1 May 2018

The problem-solving and reasoning aspects of GCSE: how are you preparing pupils (particularly those with previous low attainment)? Hosted by [@HelmeRachel](#).

This is a brief summary of the discussion – to see all the tweets, follow the hashtag #mathscpdchat in Twitter



Some of the areas where discussion focussed were:

- effective resources and strategies for teaching pupils to use reasoning, and solve problems
- helping students develop strategies to cope well with those aspects of GCSE questions
- special support for students of low prior attainment.

A particularly interesting sequence of tweets, about using 'goal free' problems, followed from this tweet by [Sharon Malley](#):



Sharon Malley @mathsmumof2 · May 1

Replying to [@HelmeRachel](#)

Using goal free problems helps them to realise what a lot of maths they know and can do.

(to read the discussion-sequence generated by a tweet look at the 'replies' to that tweet) including this one, again from Sharon Malley



Sharon Malley @mathsmumof2 · May 1

Replying to @PardoeMary

They are referenced in @mrbartonmaths book and @MrMattock has set up a website of them but they are the diagram or prompt from a normal exam question but with no questions asked about it other than what else can you work out #mathscpdchat

and this one from [Mary Pardoe](#)



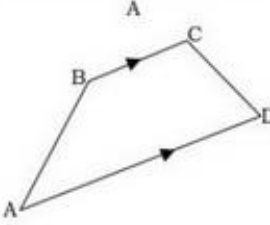
Mary Pardoe @PardoeMary · May 1

Replying to @MrMattock @mathsmumof2 @mrbartonmaths

Is it a bit like this, from the NCETM article I referred to earlier (ncetm.org.uk/resources/50980 #mathscpdchat ...

This task is about extracting and representing as much information as possible. It is not, at this stage, about finding answers to any problems. Emphasise to pupils that the task is to represent, as concisely as possible **without merely writing more word sentences**, what the given word statements tell them. Encourage the use of sketched diagrams, charts, numbers and symbols.

Example information-lists
(Lists A, B, C are based on Foundation content, D, E & F are based on Higher content)

 <p>ABCD is a trapezium with BC parallel to AD.</p> <p>BC = CD</p> <p>AB = DB</p> <p>Angle BCD is 60° greater than angle BAD.</p>	<p style="text-align: center;">B</p> <p>ABCD is a square drawn on a coordinate grid.</p> <p>The centre of the square is at the origin.</p> <p>A is the point (2, 1).</p> <p>The gradient of the diagonal CA is $\frac{1}{2}$.</p> <p>The y-coordinate of B is negative.</p>	<p style="text-align: center;">C</p> <p>This information is about a rectangle and two squares.</p> <p>The side-lengths of the rectangle are in the ratio 2 : 5</p> <p>The area of square A is 90% of the area of the rectangle.</p> <p>The side-length of square A is $\frac{3}{4}$ of the side-length of square B.</p>
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Among the other links shared were:

[MEI Problem Solving Guide](#), on teaching problem-solving, shared by [@PardoeMary](#)

[Goal free problems](#), on helping students develop effective strategies, shared by [@MrMattock](#)

[AQA's problem-solving booklet](#), on effective problem-solving resources and strategies, shared by [@mathsmrgordon](#)

[SSDD problems](#), on helping pupils develop effective problem-solving strategies, shared by [@FortyNineCubed](#)