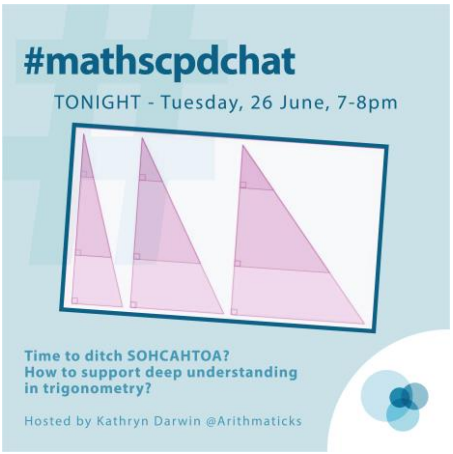
National Centre for Excellence in the Teaching of Mathematics

#mathscpdchat 26 June 2018

Time to ditch SOHCAHTOA? How to support deep understanding in trigonometry?
Hosted by @Arithmaticks

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 focused were:

- **first steps** in building the understanding of learners who have not previously encountered explicit trigonometric ideas;
- making **deep understanding** of simple trigonometry **accessible to** students who are aiming for **Foundation** tier GCSE;
- whether using **mnemonics**, such as SOHCAHTOA or formula triangles, gets in the way of achieving deep understanding;
- developing understanding of simple trigonometry out of **previously acquired deep understanding of fractions and ratios**, in particular of ratios between side-lengths of similar triangles;
- the role that the image of a **right-angled triangle with unit-length hypotenuse** can play in developing understanding;

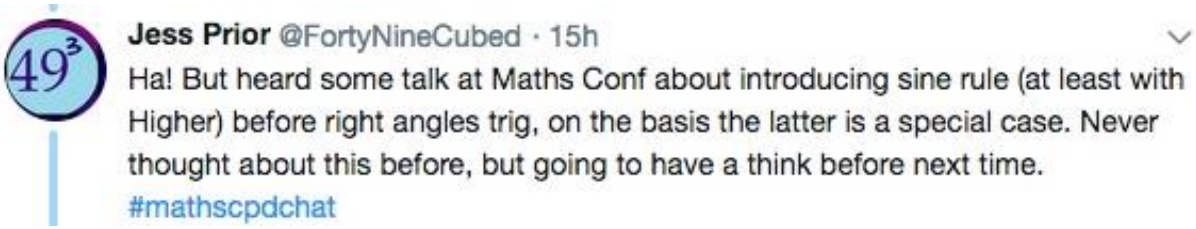
- ways in which pupils can **derive for themselves exact values** of trigonometric ratios, such as sin 30˚, cos 30˚ … .

A particularly interesting sequence of tweets, about one teacher's first steps for pupils when meeting explicitly trigonometrical ideas for the first time, followed from this tweet by Jess Prior:

including this one from Kathryn Darwin

this one from Jess Prior

and this one from Jess Prior



(to read the discussion-sequence generated by any tweet look at the 'replies' to that tweet)

Among the links shared were:
Trigonometry: new at Foundation tier. Two teachers discuss approaches to support deep understanding for all students which is an article in NCETM's Secondary Magazine 148, shared by @PardoeMary

Another useful link is:
Multiplicative Reasoning which is an NCETM Microsite addressing teaching approaches to support pupils in deepening their understanding of many aspects of mathematics by learning to reason multiplicatively, shared by @PardoeMary