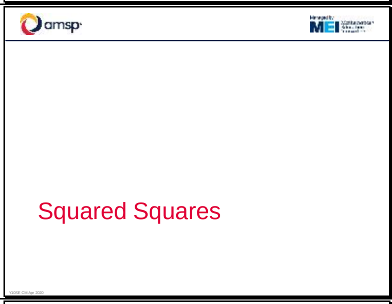
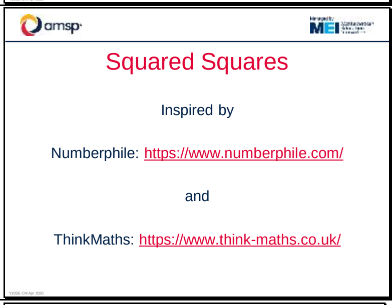
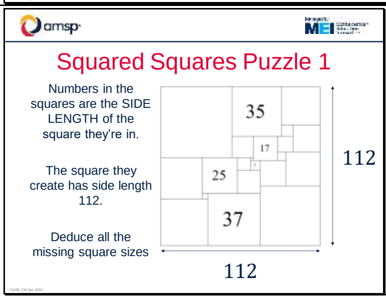
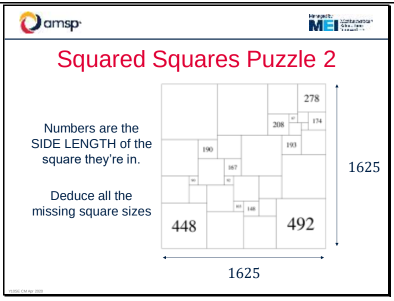
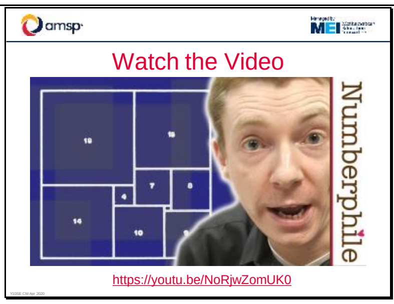
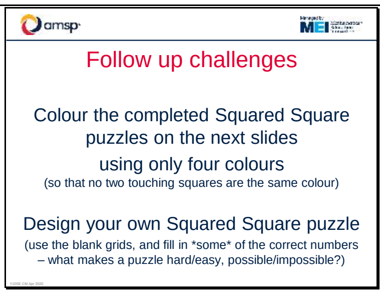
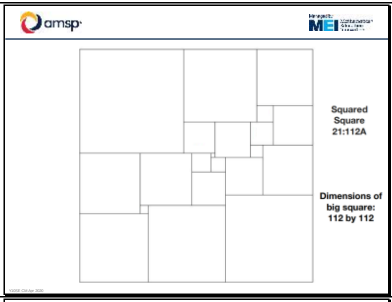
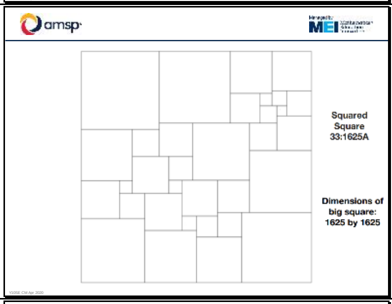
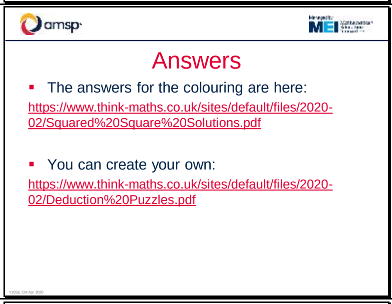
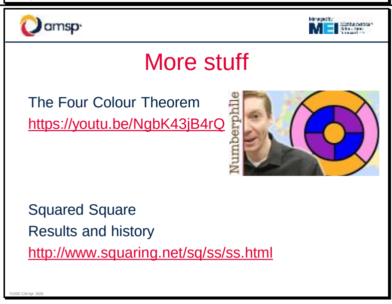
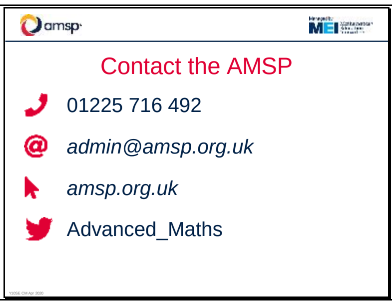
Slide 1		
Slide 2		
Slide 3		Both websites are excellent sources of mathematical enrichment and curiosities. Specific links are on the relevant slides
Slide 4		The first puzzle. We suggest starting with this, as once students have had a play with this sort of thing the video has more appeal. The square itself is special (when solved!) as it is the **smallest possible squared square** (i.e. the square built with the fewest squares) – which James discusses in the video. It is both a nice puzzle and a chance to grapple with an interesting mathematical object in its own right. Students can hopefully make a start by (for example) spotting the full vertical height is 112 and that the 35, 25, 37 squares, and one unknown square should make up this height. Similar tactics follow and allow the whole square to be solved. Algebra can be used to represent particular unknowns if a formal approach is wanted/useful. (e.g. $35+25+37+x=112$)

Slide 5		The second puzzle. Slightly longer, and a bit more challenging harder. You could make this one optional. A possible starting point is (for example) near to the top right, the square above 208 & 87 must have a side length of 208+87=295 since it lines up perfectly. This time the squared square is special for a different reason – it is categorised as 33:1625A (33 for the no. of squares, and 1625 for the side length of large square), and it's the "nicest" yet found – which means it has the smallest ratio between largest and smallest sub-squares – this helps all the elements remain visible (many squared squares need very large sub-squares and also very small sub-squares which make it hard to see both at once).
Slide 6		James and Brady's video from 2017 https://youtu.be/NoRjwZomUK0 There's a follow up with extra detail: https://www.youtube.com/watch?v=I0peG_kRE-4 **You might want to suggest that students send you a short paragraph on what they found most surprising or interesting about the video, as a way of motivating them to watch it carefully, but without generating marking**.
Slide 7		These might be considered as optional extras, suggested by Zoe Griffiths at ThinkMaths. The colouring exercise is a relatively easy exercise but which is skirting on the edges of deep mathematics: The four-colour theorem is a famous easy-to-state-hard-to-prove theorem – James Grime also did a video on it here: https://youtu.be/NgbK43jB4rQ Answers to the original puzzles, and colouring examples are on the Think Maths page (or directly here: https://www.think-maths.co.uk/sites/default/files/2020-02/Squared%20Square%20Solutions.pdf) Designing your own puzzle from the blank grids available here https://www.think-maths.co.uk/sites/default/files/2020-02/Deduction%20Puzzles.pdf is a challenge. Remove too much information and it might be impossible to solve from just the numbers, remove too little and it's trivial. Students who want to grapple with this will have to think about the logic of what can be removed while keeping it solvable.

Slide 8	 	
Slide 9	 	
Slide 10	 	
Slide 11	 	The first link is to James Grime's Four Colour Theorem Numberphile video: The Four Colour Theorem https://youtu.be/NgbK43jB4rQ The other links show how much has been done on Squared Squares Squared Square results and history http://www.squaring.net/sq/ss/ss.html https://en.wikipedia.org/wiki/Squaring_the_square
Slide 12	 	Stay informed about the AMSP and receive updates: https://amsp.org.uk/subscribe