4W homework – Set Thursday October 11th – Due Wednesday October 17th

The assignment

We’ve been studying factors in class, and there are some pretty interesting mathematical patterns to look at when it comes to factor pairs. You are going to go through the numbers 1 – 30 and find all the factor pairs for each number, then answer the questions on the back of this sheet.

Success criteria

You need to bring your completed sheet to class on Wednesday as it will form a big part of our math lesson. Please make sure it’s easy for you (and a partner) to read – spare copies are always available!

If you’re stuck

* Watch Mr Wolfson’s video on how to find all the factor pairs: goo.gl/822Vm3
* Ask Mr Wolfson on **Monday** for the help sheet
* Break it up into smaller chunks so you don’t feel overwhelmed
* Explain what you know to someone at home – talking it out sometimes helps!
* Try making different shaped arrays with cubes or drawings
* Know your math facts! ☺ - have a multiplication grid next to you

Key ideas

* Test EVERY factor until you hit a turn around
* Some numbers might only have one factor pair
* Factor pairs are the 2 numbers that multiply together to make your target.
  + i.e. even though 1 x 2 and 2 x 1 are both factor equations for 2, there is only one factor pair, which is 1,2
* Always start with “1 x” and go up one number at a time. If you move around randomly, you’ll miss factor pairs and won’t see a lot of the patterns.
* 1 x 1 is a factor equation, but there’s only a single factor (1), not a factor pair

Managing your time

This task should take around an hour, but it requires you to concentrate and think hard, especially as the numbers get bigger and there are more factor pairs.

I suggest breaking it up into chunks of 5 or 10 numbers at a time. However, you can do it all at once.

I would recommend starting way before Tuesday night as there are no shortcuts, and you will be asked to complete the sheet fully in your own time in school if the work isn’t finished or is incomplete.

As always, please contact me as soon as possible if there’s a problem!

Mr Wolfson

Factor pairs questions

1. Which number has the MOST number of factor pairs? How many pairs?
2. Which numbers have only 1 factor pair?
3. 1, 4, 9, 16 and 25 are all **square** numbers. What is special about how many FACTORS (not factor pairs) they have?
4. What shortcuts or quick tips did you find to make things easier for you?
5. Name 1 pattern that you saw in your work