Year 5 – Spring 1

I can find factor pairs of numbers up to 100.

By the end of this half term, the children should know all multiplication and division facts up to 12 x 12. When a given number is a product in one of these times tables, they should be able to state a factor pair which multiply to make this number. The aim is for them to recall the below facts **instantly**.

factors = product

6 x 4 = 24

Numbers that multiply together are called factors.

Their total when multiplied is called the product.

Key Vocabulary:

Can you find a **factor** of 24?

Find two numbers whose **product** is 20.

"I know that 6 is a factor of 42 because 7 multiplied by 6 equals 42."

FACTOR RULES

2 will be a factor when... the number is even.

3 will be a factor when... sum of digits is a multiple of 3.

4 will be a factor when... you halve an even number and still get an even number.

5 will be a factor when... the number ends in 5 or 0.

6 will be a factor when... 3 is a factor and the factor pair of 3 is even.

8 will be a factor when... 4 is a factor and the factor pair of 4 is even.

9 will be a factor when... the digits add up to 9, or a multiple of 9.

Factor Pairs

What are all the numbers you can multiply together to get your target number?

Target Number = 36

1, 2, 3, 4, 6, 9, 12, 18, 36

Key Imagery:

Arrays:

Arrays can help you to visualise.

Here, 12 counters have been arranged in different ways. What does this tell us? We know that 3 x 4 and 2 x 6 both make 12. Therefore, these are factor pairs.

Do you agree? Why? Explain!

The bigger the number, the more factor pairs it will have.

Odd One Out

Circle the number which does not have 3 as a factor then explain your choice.

36   30   25

18   24

True or False?

An even number always has an even number of factor pairs and an odd number always has an odd number of factor pairs.

Prove it!