

Poole Elementary 4th Grade Math Homework Helper

Unit 1- MCC4.0A.4

MCC.4.OA.4 Find all factor pairs for a whole number in the range 1–100. Recognize that a whole number is a multiple of each of its tors. Determine whether a given whole number in the range 1–100 is a multiple of a given one-digit number. Determine whether a priven whole number in the range 1–100 is prime or composite.

In other words...I can find all the factor pairs for a specific number of 100 or less. I can find the multiples of a specific factor (of 100 or less).

A factor pair are two numbers that are multiplied together to make a specific number. Each number in a factor pair is called a factor. I can use multiplication tables/facts to help me figure them out.

For example: What are all the factors for 24? I can list all the multiplication facts to figure out the

factors.	1×24	6×4	
10000101	when I's drive I	8 x 3	I only have to list each factor one
	2 X 12		time so all the factors for 24 are: 1, 2, 3, 4, 6, 8, 12, 24
	3 x 8	12 x 2	
	4 x 6	24 x 1	

I can also find the multiple of any factor. All I have to do is skip count by that factor. To find all the multiples of the factor 3, I skip count by 3: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30

Another way to find factors is by using a factor rainbow: List all the factors of 24



I listed out all the factors and connected the factor pairs by a different line of color.

I also know...that a specific number is a multiple for both of the factors in a factor pair (that equal that specific number)

I can pick a factor pair and skip count by each number to show that they share a multiple (the product when the two numbers are multiplied together). For example: 3 x 8 is a factor pair for 24. Show that 24 is a multiple of both 3 and 8.

kip count by 3: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30 Then I skip count by 8: 8, 16, 24, 32, 40, 48, 56, 64, 72, 80

I can see that 24 is a multiple of both 3 and 8.

And...that a prime number has only two factors: 1 and itself. I know that a composite number has two or more factors.

I can make an array to show that **7 is a prime number**: **CEPT**(2010) The only factors for 7 are 1 and itself (7) 1 x 7

	There
7 x 1	make
	7 squa

There is only one way to make a rectangular array with 7 squares: with 7 and 1.

24 is a composite number because it has two or more factors: 1, 2, 3, 4, 6, 8, 12, 24

Some new math words I am using with this standard: Some of these may be review words

 $\underline{\text{Array}}$ – an arrangement of objects in equal rows and columns. When figuring out factors, a rectangle shape filled with squares is used to make the array.

<u>Composite number</u> – a whole number that has more than two factors. For example 12 is a composite number because its factors are 1, 2, 3, 4, 6, 12.

<u>Factor</u> – a whole number that is multiplied to get a product or one of the numbers in a multiplication problem. For example 3 is a factor that is multiplied by 4 (another factor) to get a product of 12. A factor of a number divides evenly into that number. 3 divides evenly into 12 and 4 also divides evenly into 12.

Factor pair – a unique pair of numbers that equals a specific multiple. For example 3 and 4 are a factor pair for only 12. If 3 is multiplied by any other number besides 4, the product will not be 12.

<u>Multiple</u> – the product of two factors (a whole number multiplied by another whole number). For example 12 is a multiple of 3 and it is also a multiple of 4.

Prime Number – a number with exactly two factors: 1 and itself. For example 2 is a prime number because no other factors divide evenly into it. The only factors for 2 are 1 and itself (2).

Product – the answer to a multiplication problem.