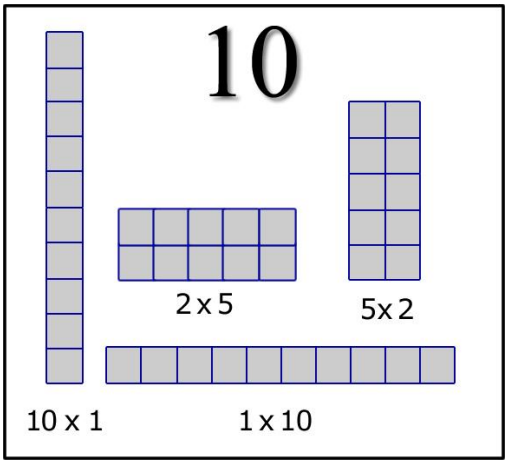
For Topic 7, the students should know:

Factors of a number are the numbers multiplied to give that particular number as a product.

For example, the factors of 24 are 1, 2, 3, 4, 6, 8, 12, and 24. The pairs of numbers multiplied to produce 24 are called “factor pairs.” These would be 1 and 24, 2 and 12, 3 and 8, 4 and 6.

You can show factors by making arrays:



You can also show factors by making an organized list.

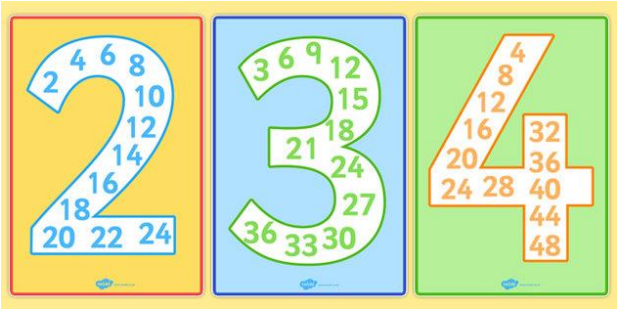
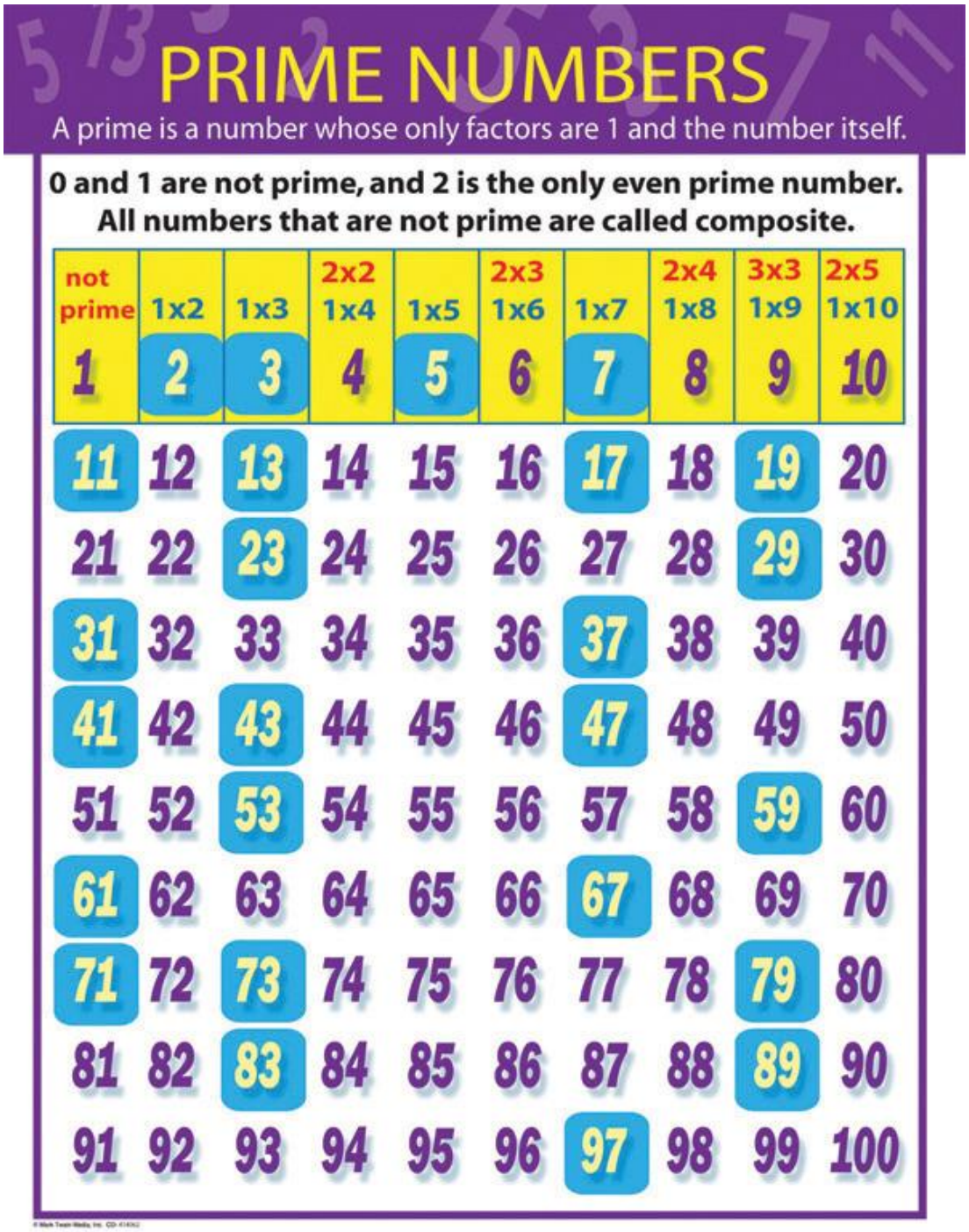
Start with 1 and the number. Proceed until the number you use has already been used. Then you know you found all of the factors.
For example, an organized list for the factors of 24 would look like this:

1 X 24
2 X 12
3 X 8
4 X 6

There is no five, and we already used six, so we are done. Of course, you can use the inverse of these multiplication facts as well, because multiplication is commutative.

You can also make a factor rainbow in order to find the factors of a given number:

Multiples of a number are any products produced when that number is multiplied by other numbers.
For example, multiples of 3 would be 3, 6, 9, 12, 15, 18, and so on.



Prime numbers are numbers that only have two factors, the number one, and itself.
Composite numbers are numbers that have more than two factors.