Patterns:

a repetition (something that is repeated)

1) 9 , 11 , 13 , 15 , 17 , 19 , ___
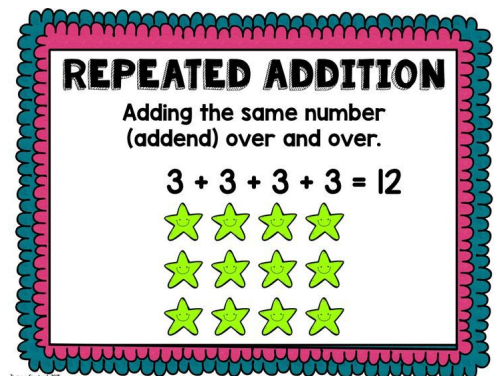
2) 1 , 7 , 13 , 19 , 25 , 31 , ___

3) 8 , 11 , 14 , 17 , 20 , 23 , ___

4) 9 , 16 , 23 , 30 , 37 , 44 , ___

MathATube.com

Repeated Addition:

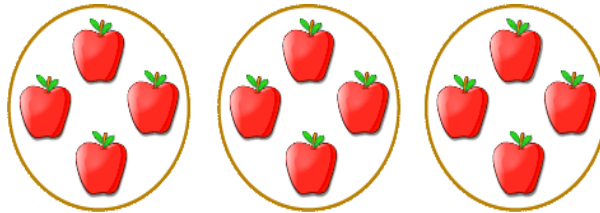a strategy to multiply numbers where the same number is added multiple times

REPEATED ADDITION
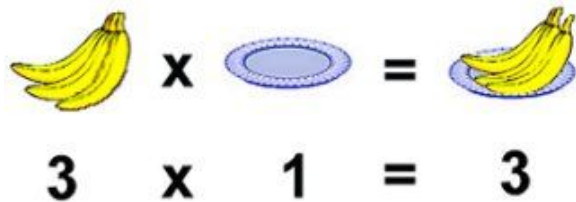Adding the same number (addend) over and over.

3 + 3 + 3 + 3 = 12

⭐⭐⭐⭐
⭐⭐⭐⭐
⭐⭐⭐⭐

Equal Groups:

having the same amount of something in each cluster or category

Equation:

a mathematical sentence with an equal sign

$$3 \times 1 = 3$$

Factors:

numbers that are multiplied to give a product

$$3 \cdot 2 = 6$$

These are the **factors** of **6**.   This is the **product**.
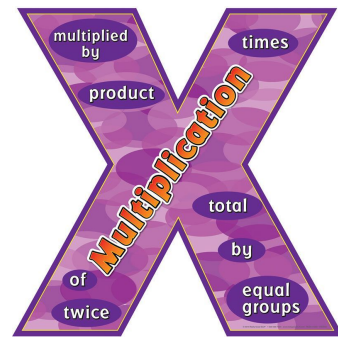
Product:

the answer to a multiplication product

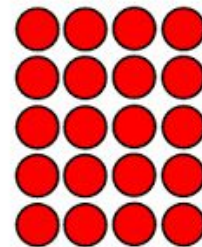These are the **factors** of **6**. This is the **product**.

Multiplication:

a mathematical operation that combines equal groups

multiplied by   times
product
Multiplication
total
by
of
twice   equal groups

Array:

a set of objects or numbers arranged in order in rows & columns
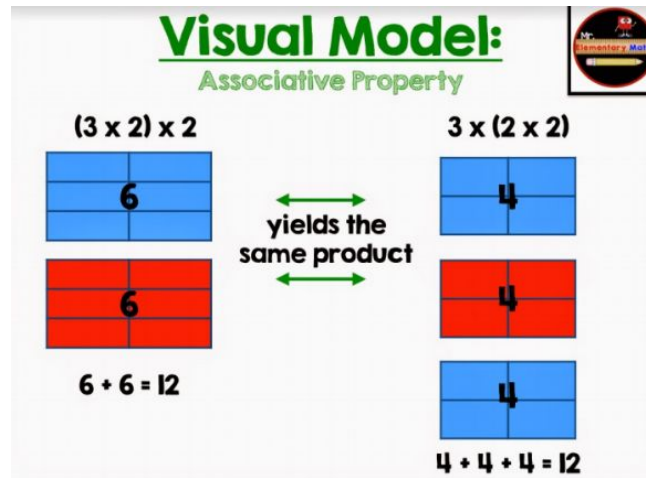
Repeated Groups:

having the same number in each group each time

4 groups of bananas
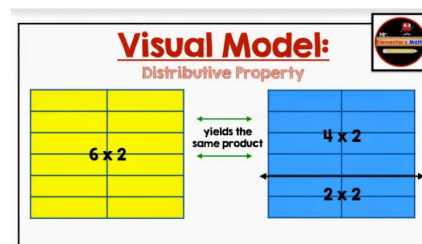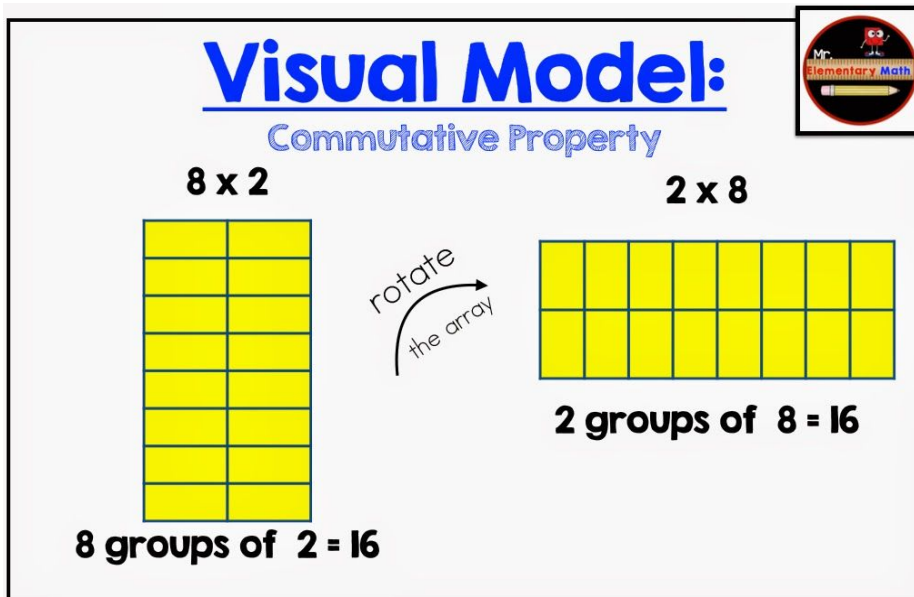
$4 \times ③ = 3 + 3 + 3 + 3 = 12$

Associative Property:

In addition & multiplication:
no matter how the numbers are
grouped, the answer will always
be the same

Distributive Property:

the product of a
factor and a sum
equals the sum of
the product

Visual Model: Commutative Property

8 x 2

2 x 8

rotate the array

2 groups of 8 = 16

8 groups of 2 = 16

Commutative Property:

In addition & multiplication: numbers can be added or multiplied in any order