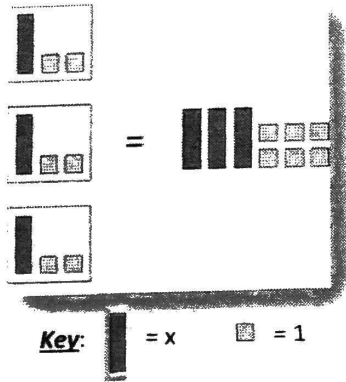


The **DISTRIBUTIVE** Property

This property is the BEST one of all! One great use of the DISTRIBUTIVE property is that it allows you to do mental math quickly. If you master the art of the distributive property, you can look like an absolute GENIUS to your friends!!

"A picture is worth 1000 words..."

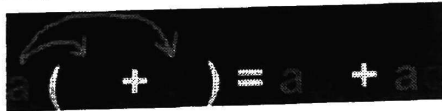


First, there are 3 equal groups. Each group is written as $(x + 2)$. There are 3 groups of $(x + 2)$.

In the second part, they are all put together. You can see that there are three x's and six 1's, for a total of $3x + 6$. Even though both sides look different, they represent the problem

$$3(x + 2) = 3x + 6$$

The Distributive Property:



*Make sure that the factor outside the parentheses is distributed evenly to the addends inside.

EXAMPLES:

$$3 \cdot (4+1) = 3 \cdot 4 + 3 \cdot 1$$

$$12 + 3$$

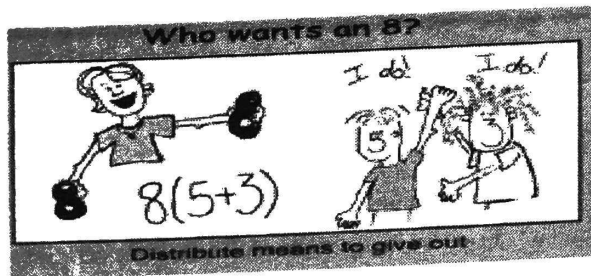
$$\textcircled{15}$$

multiply

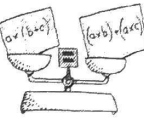
$$5(x + 6)$$

$$5x + 30$$

$$2(x+3) = 2x+6$$



LET'S DISTRIBUTE! (Distributive Property Practice)



Draw a picture to represent the following problems. Then, write a problem using the distributive property. Finally, evaluate the problem.

1) There are 3 girls. Each girl has 1 blue bows and 4 pink bows. How many bows do they have in all?

Picture:

Problem:

2) Ethan has 2 dogs. Each one has 3 bones and 2 leashes. How many bones do they have in all, and how many leashes do they have in all?

Picture:

Problem:

Apply the distributive property to write the following in simplest terms:

HINT: Be careful when distributing negatives!!

3) $5(-2 + 8)$

4) $10(x + 2)$

5) $14(a - b)$

6) $5(9 - 11)$

7) $-12(x + 2)$

8) $9(-x + 3)$

9) $2(-1 + 4)$

10) $6(x + 2) + 3(x + 2)$

11) $4(-2 - 3)$