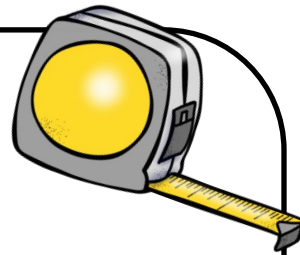


Tools for

Multiplication

Jennifer Brokofsky 2016

Key Words



factor

factor

product



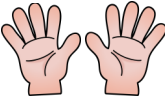
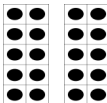
$$8 \times 4 = 32$$



Times 2-Doubles

Multiplying by 2 is the same as doubling.



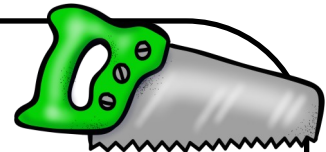
1x2 	2x2 	3x2 	4x2 	5x2 
6x2 	7x2 	8x2 	9x2 	10x2 



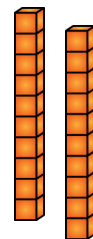
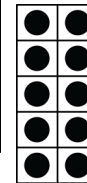
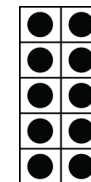
Times 10

Multiplying by 10 increase the number tenfold.

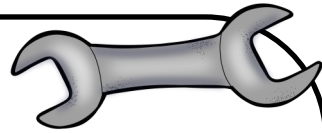
Think ten-frames and base ten blocks.



10x2



Times 5



Think skip counting by 5's or think half of multiplying by 10.

5 10 15 20 25 30 35 40 45 50 ...

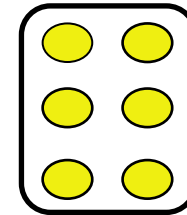


Times 1

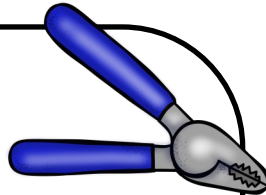


Multiplying by 1 is the same as the number because it is 1 group.

$$6 \times 1 = 6$$

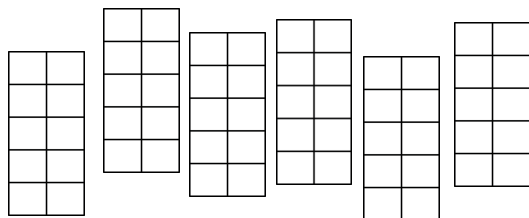


Times 0



When you multiply a number by 0 the product is always 0.

$$6 \times 0 = 0$$

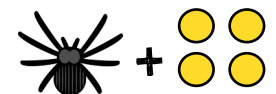


Times 3



Multiplying by 3 can be thought of as doubling the number and then adding 1 more group, or as tripling the number.

4 x 3. Think 4x2 and add one more group of 4.



Times 4-Double, Double

Double the number then *double* it again.

$$6 \times 4$$

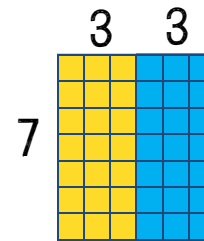
Think $(6 \times 2) + (6 \times 2)$



Times 6

Multiplying by 6 is the same as doubling a multiple of 3.

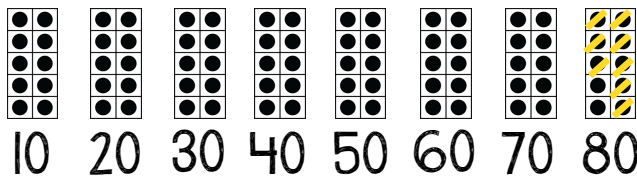
6×7 Think $(3 \times 7) + (3 \times 7)$



Times 9- See 9. Think 10

Think of the 9 as a 10, then subtract one group.

8×9 Think $8 \times 10 - 8$



Times 8-Double, Double, Double

Multiplying by 8 is *double* multiplying by 4.

$$3 \times 8$$

Think $(3 \times 2) + (3 \times 2) + (3 \times 2) + (3 \times 2)$

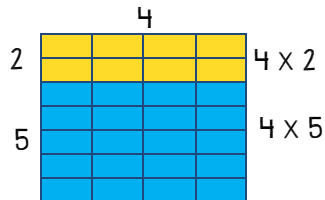


Times 7- *Small Steps*

Decompose the 7 and multiply in smaller steps.

Distributive Property

4×7 . Think $(4 \times 2) + (4 \times 5)$



Commutative Property

Turn Arounds

Order doesn't matter when multiplying.

