COMMUTATIVE LAW of MULTIPLICATION

This means numbers can be multiplied in any order.

3 x 10 x 5 = 3 x 5 x 10

We can rearrange the order in which we multiply to make combinations that are easier to multiply.

Is it easier to solve 3 x 10 x 6 or is it easier to solve 3 x 6 x 10

X	1	2	3	4	5	6	7	8	9	10
1	1	2	3	4	5	6	7	8	9	10
2	2	4	6	8	10	12	14	16	18	20
3	3	6	9	12	15	18	21	24	27	30
4	4	8	12	16	20	24	28	32	36	40
5	5	10	15	20	25	30	35	40	45	50
6	6	12	18	24	30	36	42	48	54	60
7	7	14	21	28	35	42	49	56	63	70
8	8	16	24	32	40	48	56	64	72	80
9	9	18	27	36	45	54	63	72	81	90
10	10	20	30	40	50	60	70	80	90	100

13 x 5 =

(10+3) x 5

(____x ____) + (____ x____)

____ + ____

24 x 4 =

(20+4) x 4

(____ x ____) + (____x ____)

____ + ____

12 x 13 =

(10+2) x 13

(____x ____) + (____ x____)

____ + ____

22 x 35 =

(20+2) x 35

(____ x ____) + (____x ____)

____ + ____

40 x 6 =

4 x 10

___ x ___ x 6

___ x ___ x 10

50 x 7=

5 x 10

___ x ___ x 7

___ x ___ x 10

30 x 9 =

40 x 4 =

80 x 3 =

60 x 9 =

400 x 5 =

600 x 8 =

DISTRIBUTIVE LAW of MULTIPLICATION

Groups of the same number can be split into parts.

XXXXXX XXXXXX XXXXXX XXXXXX XXXXXX XXXXXX

4 x 6 + 2 x 4 = 6 x 6

(4 groups of 6) + (2 groups of 6) = 6 groups of 6

(6 groups of 6) is the same as (4 groups of 6) + (2 groups of 6)

(4 groups of 6) + (2 groups of 6) = 6 groups of 6

so ..... 6 x 6 = (4 x 6) + (2 x 6)

22 x 35

22 groups of 35 = (20 groups of 35) + (2 groups of 35)

22 x 35 =

(20 + 2) x 35 =

(20 x 35) + (2 x 35)

= 350 + 70

= 420

Build Up Strategy

If 4x5 = 20

then 5x5 = 25 (+5)

and 6x5 = 30 (+5)

We add 1 group of 5 as we build up.

Try these:

2x7 = 14

3x7 =

4x7 =

10x6 = 60

11x6 =

12x6 =

20x4 = 80

21x4 =

22x4 =

30x6 = 180

31x6 =

32x6 =

Try Building Down

40x4 = 160

39x4 =

38x4 =

40x5 = 200

19x5 =

18x5 =