

## MULTIPLICATION STRATEGIES

**Skip counting**       $5 \times 7 = ?$

5, 10, 15, 20, 25, 30, 35

1.....2.....3.....4.....5.....6.....7

so...  $5 \times 7 = 35$

**Equal groups**       $4 \times 6 = ?$

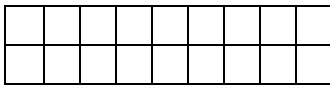


4 groups of 6 equals 24 objects.

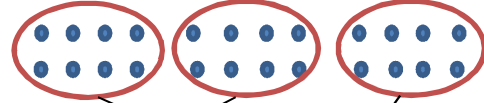
**Array Model**

$9 \times 2 = 18$

2



**Repeated Addition**       $3 \times 8 = 24$



8 + 8 + 8 = 24

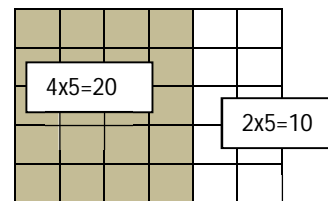
or  $0+8=8$        $8+8=16$        $16+8=24$



3 rows of 3 = 9

**Equal Groups in an Array**       $3 \times 3 = 9$

**Array Model Using Distributive Property (Flexibility)**       $6 \times 5 = ?$



**Open Area Array**       $12 \times 22 =$

$10 + 2$

20

+

2

$10 \times 20 = 200$	$2 \times 20 = 40$
$10 \times 2 = 20$	$2 \times 2 = 4$

$200 + 40 = 240$

$20 + 4 = 24$

264

**Partial Products**



$4 \times 1 = 4$

$4 \times 20 = 80$

$10 \times 1 = 10$

$10 \times 20 = 200$

294

**Doubling & Halving**

$15 \times 8 =$  Double 15 (30)

Half 8 (4)

Problem is now  $30 \times 4$

$30 \times 4 =$  Double 30 (60)

Half 4 (2)

Problem is now  $60 \times 2$

$60 \times 2 =$  Double 60 (120)

Half 2 (1)

Problem is now  $120 \times 1$

$120 \times 1 = 120$ ... so  $15 \times 8 = 120$