Multiplying by 0
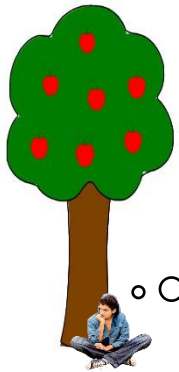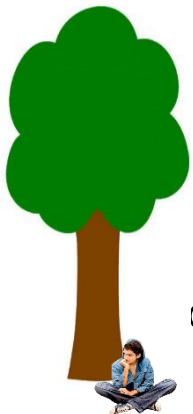
You always end up with 0 because either you have zero 'groups' or there isn't anything in the 'groups'.

$0 \times 3 =$

I want to sell the apples on my tree. But I have no bags to put my apples. How many bags of apples can I sell?

$3 \times 0 =$

I have these 3 bags that I would like to fill with apples to sell. But there aren't any apples growing on my tree. How many bags of apples can I sell?

Multiplying by 1

It is just that number! Either you will have one group with that many items or you will have that many groups with only one item in each.

$1 \times 4 = 4$

$4 \times 1 = 4$

Multiplying by 10

Makes the number ten times bigger.

6 x 10 =

6 x 1 = 6 → **6 x 10 = 60**

Six groups of one is six.

Six groups of ten is sixty.
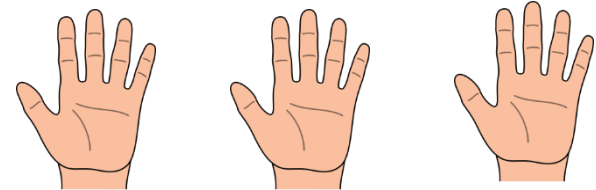
1 x 6 = 6 → **10 x 6 = 60**

One group of six is six.
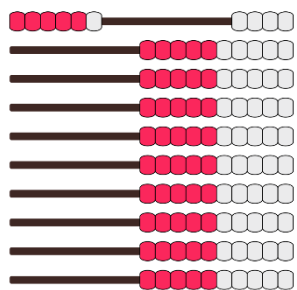
Ten groups of six is sixty.
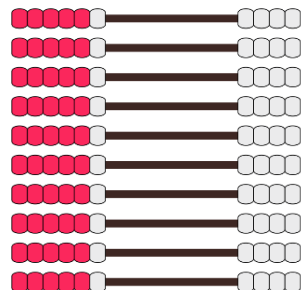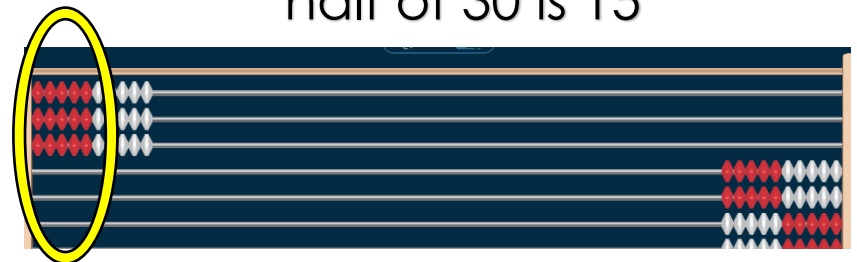
Multiplying by 5

Skip count by 5s.

3 x 5 =

5　　10　　15

Or multiply by 10 and cut the total in half.

3 x 5 =

3 x 10 = 30

half of 30 is 15

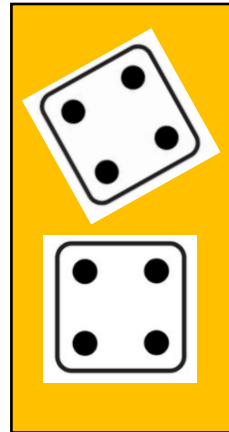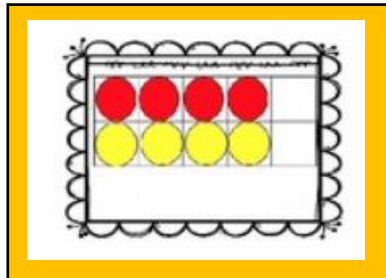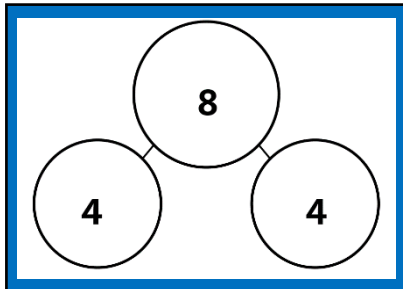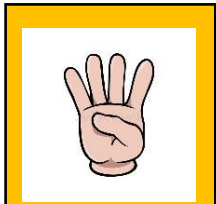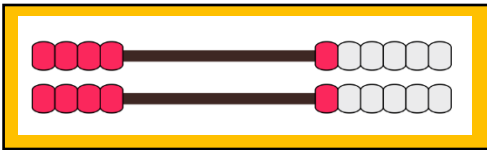# Multiplying by 2

Double.

(Think Addition Double Facts)

2 x 4 =

2 groups of 4
is the same as **4 and 4 more**

Multiplying by 4
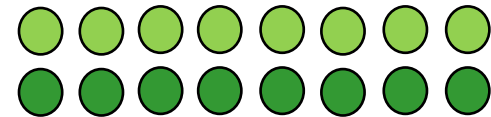
Double, double.

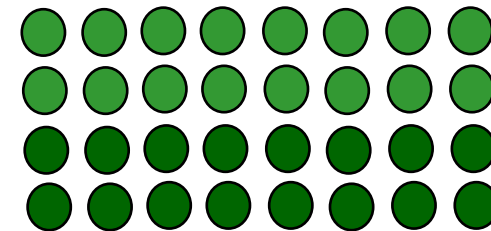$$4 \times 8 =$$

1 group of 8

8

double that
2 groups of 8

8 + 8 =
16

double that
4 groups of 8

16 + 16 =
32

Multiplying by 8
Double, double, double.

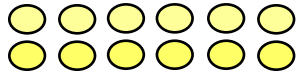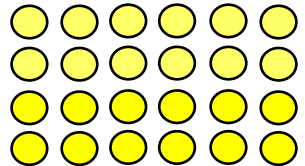**8 x 6 =**

1 group of 6 | 6

double that
2 groups of 6 | 6 + 6 = **12**

double that
4 groups of 6 | 12 +12 = **24**

double that
8 groups of 6 | 24 +24 = **48**
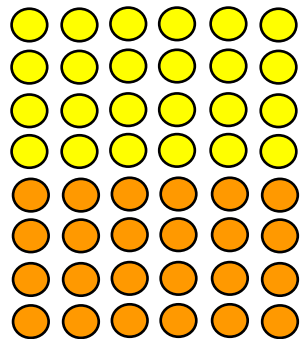
Multiplying by 3
Double and add another group.

3 x 8 =

If **2 x 8 =**
Or **8 + 8 = 16**
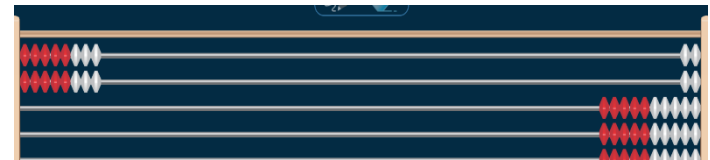
then **3 x 8** will add just
1 more group: **2 x 8 = 16**
1 x 8 =   8
24
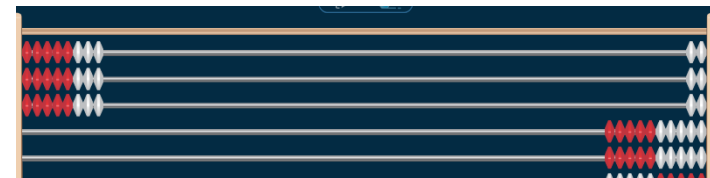
Multiplying by 6

Multiply by 5 and **add one more group**.

7 x 6 =
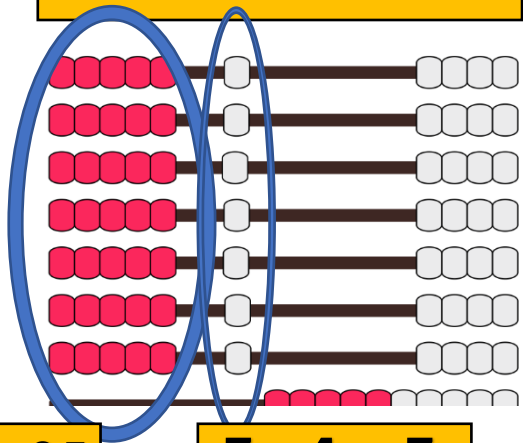
7 x 5 = 35   **7 x 1 = 7**

42

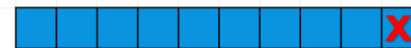**Multiply by 3 then double.**

7 x 3 =

7 x 2 = 14
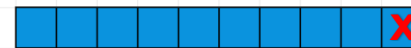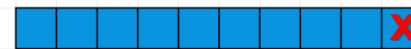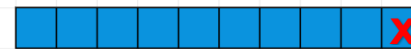
+ 7

21   + 21 = 42

Multiplying by 9

Multiply by 10 then take away a group.

4 x 9 =

4 x 10 =

4 groups of 10 is 40

X
X
X
X

4 groups of 9 is 36 (40-4)

Or break it down and use the strategies you know.

4 x 9 =

4 x 5 = 20

4 x 4 = 16

36

Multiplying by 7

Use related facts.

8 x 7 =

8 x 5 = 40   **8 x 2 = 16**

40 + 16 = 56

Or use the other strategy.

2 x 7 = Double 7

3 x 7 = Double and add a group of 7

4 x 7 = Double, double

5 x 7 = Count by 5s

6 x 7 = Count by 5s and add a group of 7

8 x 7 = Double, double, double

9 x 7 = Multiply by 10, subtract a group of 7