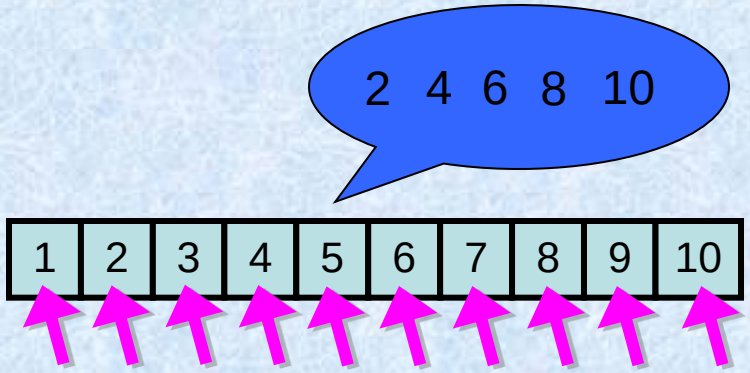
Multiplication methods

Multiplication - Reception

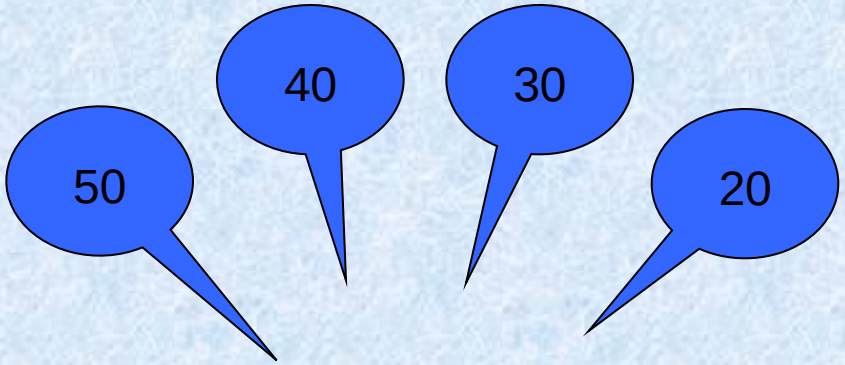
1. **Count in 2s**

Five **pairs** of socks. Ten socks



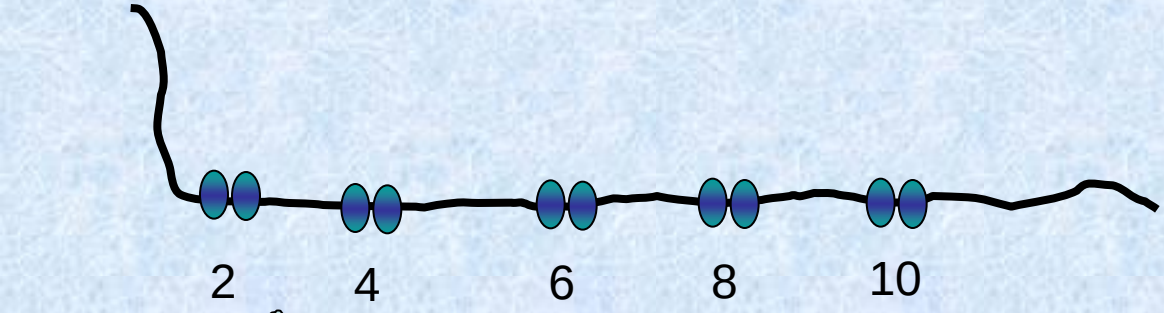
Point to a number track, saying every other number aloud.

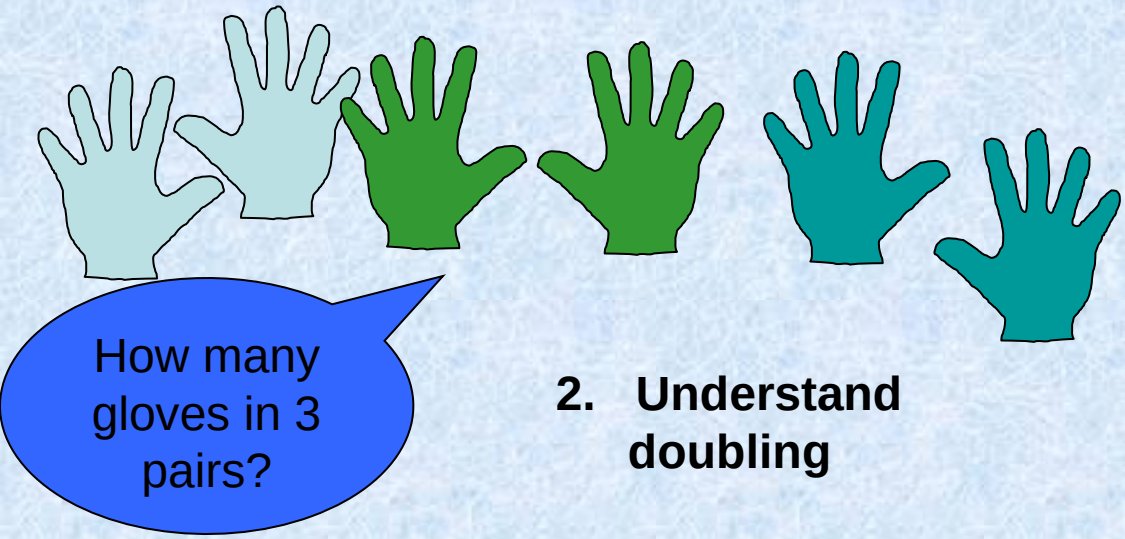
2. **Count on in 10s (and back) from a given tens number**

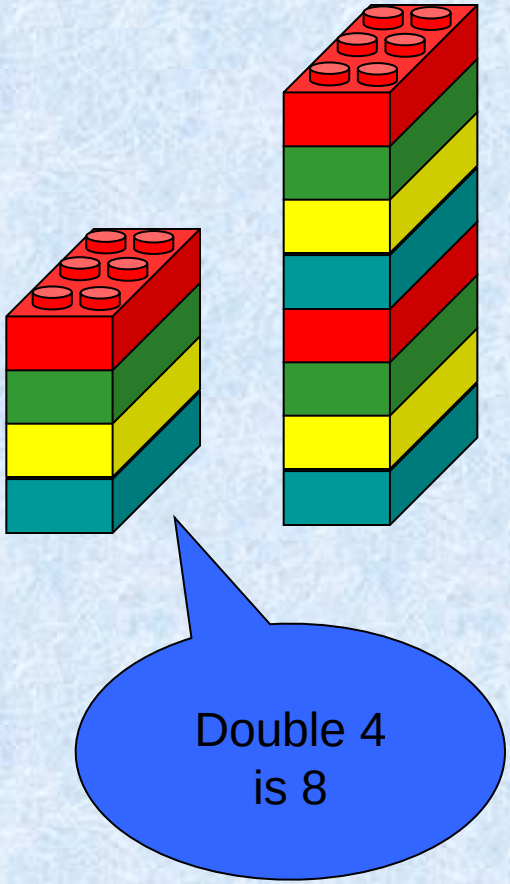


Multiplication – Year 1

1. **Count in 2s, 10s and 5s**





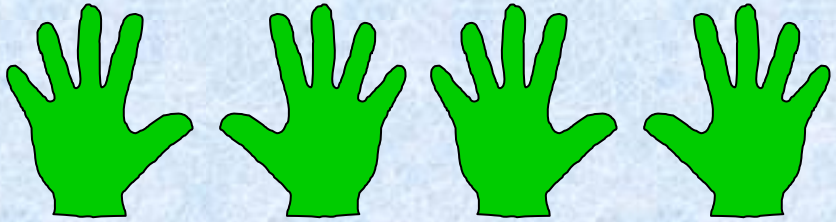


2. **Understand doubling**

3. **Understand multiplication as repeated addition**

Multiplication – Year 2

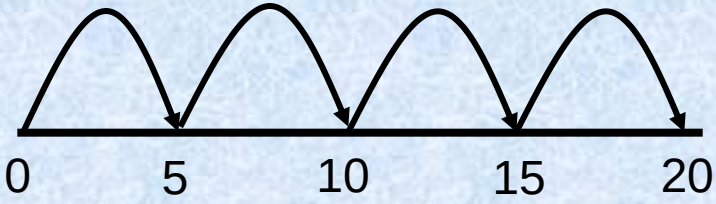
1. **Count in 2s, 10s and 5s, recording on a number line**



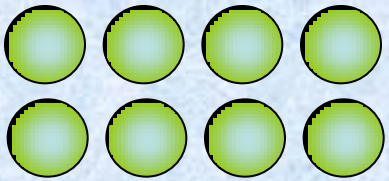
5 + 5 + 5 + 5 = 20

5 x 4 = 20

5 multiplied by 4 is 20

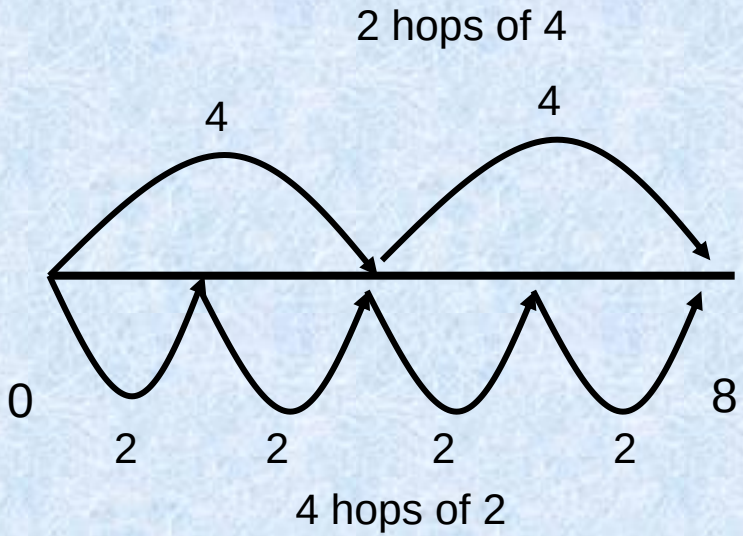


2. **Introducing arrays**



4 x 2 = 8

2 x 4 = 8



3. **Know by heart multiplication facts for 2's, 5's and 10's. Derive quickly, corresponding division facts**

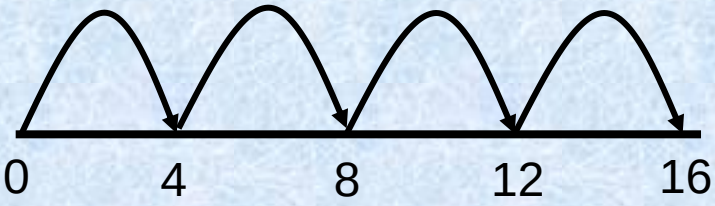
Multiplication – Year 3

1. Arrays

8 x 5 = 40

5 x 8 = 40

2. Count in 2s, 10s, 5s, 3s and 4s, recording on a number line Begin to recognise these as tables facts

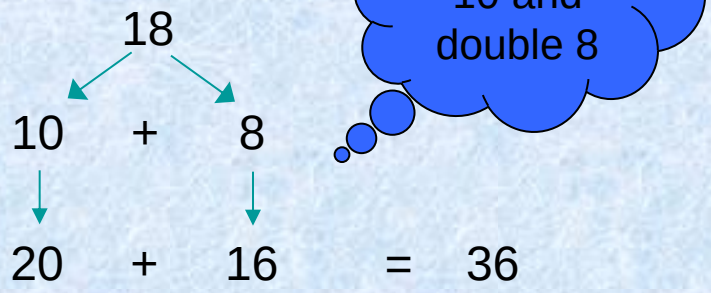


3. Multiplying by 10 and 100

1	2	3	4	5	
10	20	30	40	50	
100	200	300	400	500	6

4. Use partitioning to double numbers

Double 18



Multiplication – Year 4

1. **Using arrays to show partitioning when multiplying TU x U**

30 + 21 = 51

2. **Informal jottings supporting mental multiplication using partitioning**

17 x 3 = (10 x 3) + (7 x 3)

= 30 + 21

= 51

3. **Leading to the simple grid method for TU x U**

x	10	7
3	30	21

30 + 21 = 51

= 51

4. **Know by heart all multiplication facts to 12x12 and derive quickly, corresponding division facts**

Multiplication – Year 5

1. Grid method for HTU x U

(Go back to array if necessary)

324 x 6 =

x	300	20	4	
6	1800	120	24	= 1944

2. Link to expanded vertical method

324 x 6 =

```
  3 2 4
x     6
-------
    2 4
  1 2 0
1 8 0 0
-------
1 9 4 4
-------
```

3. Leading to the compact vertical method

```
  3 2 4
x     6
-------
1 9 4 4
-------
1 1  2
```

4. Grid method for TU x TU

(Go back to array if necessary)

27 x 32 =

x	20	7		
30	600	210	= 810	} +
2	40	14	= 54	}
			864	

5. Recall tables facts up to 10 x 10

Multiplication – Year 6

1. Grid method for HTU x TU

x	700	50	3
20	14000	1000	60
6	4200	300	18

= 15060
= 4518
+
19578

2. Link to expanded vertical method

```
  753
x  26
-----
14000
 1000
   60
 4200
  300
   18
-----
19578
-----
```

3. Leading to the compact vertical method

```
  753
x  26
-----
15060
 4518
-----
19578
-----
```

4. Extend to decimals with up to two decimal places

Remember to line up the decimal points

```
 23.75
x    3
-----
71.25
-----
 1 2  1
```