Year 2 Multiplication and Division (including fractions)

Recall of facts

Recall and use multiplication and division facts for 2, 5 and 10 x tables.

Recall doubles and equivalent halves up to 15+15

Recall doubles of multiples of 5 up to 50

Don't Count, Calculate…

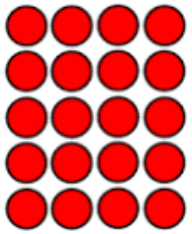
If I know that… 2 x 6 = 12
I also know 6 x 2 = 12
and 12 ÷ 2 = 6
12 ÷ 6 = 2
$\frac{1}{2}$ of 12 is 6
double 6 is 12

If I know 7 x 5 = 35 then 8 x 5 = 40 because it is one more group of 5

Multiplication and Division can be represented in different ways…

These structures show the relationship between multiplication and division.

array



4 x 5 = 20
5 x 4 = 20
20 ÷ 4 = 5
20 ÷ 5 = 4

bar model

20			
5	5	5	5

5+5+5+5=20

20				
4	4	4	4	4

4+4+4+4+4=20

Comparing Numbers…… < = >

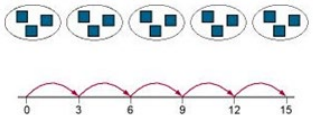
4 x 5 < 5 x 5

30 ÷ 5 > 30 ÷ 10

$\frac{1}{2} > \frac{1}{3}$

Count on in multiples of 3

3+3+3+3+3 = 5 x 3 = 15



Division as sharing and grouping

10 ÷ 2 = 5

Bob has 10 cakes. He *shares* them with Tim. How many do they have each?

Bob has 10 cakes. He puts 2 on each plate. How many plates does he have?

True or False?

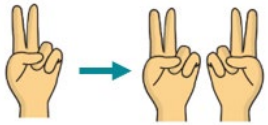
£1 = 2 x 50p
4 x 5 = 5 x 4
20 ÷ 5 > 20 ÷ 4
20p = 3 x 5p

Problems

Sally buys 3 cinema tickets costing £5 each. How much does she spend?

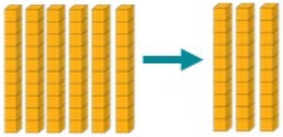
Doubling and Halving

Doubling is the same as multiplying by 2
Halving is the same as dividing by 2



Double 2 is 4

5 x 2 = 10

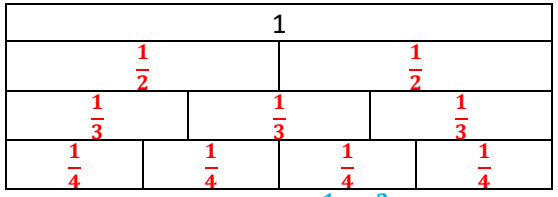


Half of 60 is 30

10 ÷ 2 = 5

Use a variety of words

multiple, multiply, array, tables, times, groups of, lots of, twice, double, repeated addition
equal groups of, divide, divided by, divided into, remainder, partition, left over, half, quarter, third,



The bar model shows that $\frac{1}{2} = \frac{2}{4}$

$1 = \frac{2}{2} = \frac{3}{3} == \frac{4}{4}$ **Equivalent fractions**

Always Sometimes Never?

If you double an odd number, the answer is always even? If you multiply a number by 5, the answer is always even.

Scaling

I have 5 cars. My friend has *twice as many*. How many do we have altogether?

5	
5	5