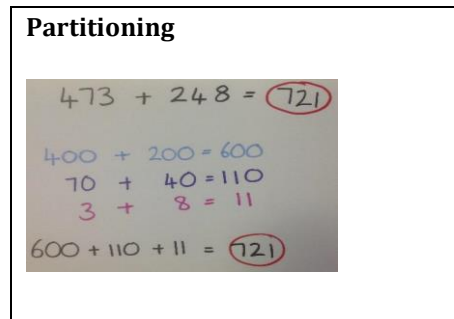
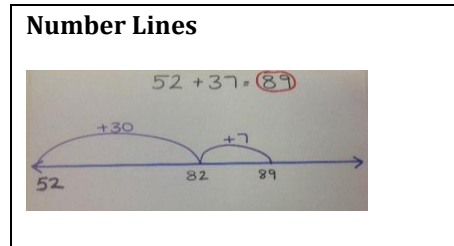
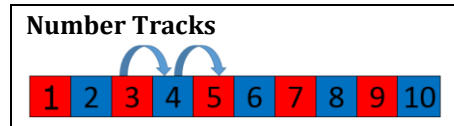


**Addition:** finding the total by combining two or more numbers/amounts.

Early skills	Visual representations	Mental calculations	Written calculations	Noticing
--------------	------------------------	---------------------	----------------------	----------

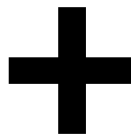


**Compensation/constant difference**

$138 + 59$  could be changed to  $137 + 60$

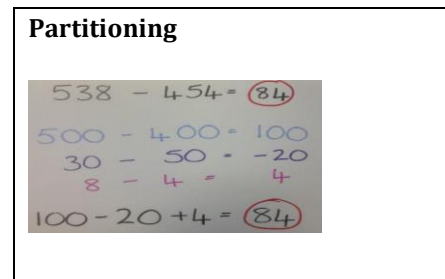
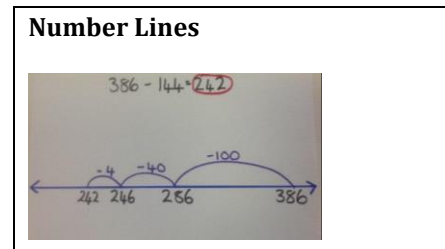
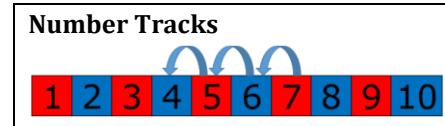
**Vocabulary**

Add  
Total  
Sum  
Altogether  
More  
More than?  
Plus  
Increase  
How many more?  
Double  
Inverse



**Subtraction:** taking away or finding the difference.

Early skills	Visual representations	Mental calculations	Written calculations	Noticing
--------------	------------------------	---------------------	----------------------	----------



**Compensation/constant difference**

$119 - 89$  could be changed to  $120 - 90$

**Vocabulary**

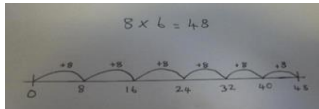
Subtract  
Take away  
Difference  
Leave  
Fewer than?  
Minus  
Decrease  
How many left?  
Halve  
Half  
Inverse



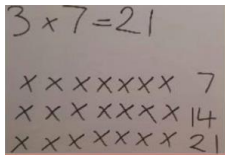
**Multiplication:** repeated addition or scaling.

Early skills	Visual representations	Mental calculations	Written calculations	Noticing
--------------	------------------------	---------------------	----------------------	----------

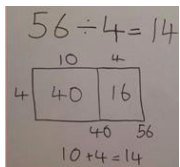
**Grouping through Number Lines**



**Grouping through Arrays**



**Grouping through Grids**



**Using multiples and factors**

Use multiples to solve  $30 \times 700$   
Use factors to solve  $18 \times 20$

**Vocabulary**

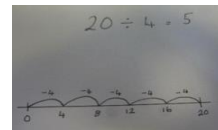
Lots of  
Groups of  
Times  
Multiply  
Multiple  
Factor  
Product  
Repeated  
Addition  
Array  
Row  
Inverse



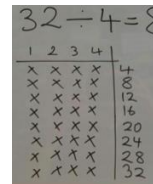
**Division:** grouping or sharing.

Early skills	Visual representations	Mental calculations	Written calculations	Noticing
--------------	------------------------	---------------------	----------------------	----------

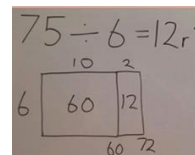
**Grouping through Number Lines**



**Grouping through Arrays**



**Grouping through Grids**



**Using multiples and factors**

Use multiples to solve  $222/3$   
Use factors to solve  $96/6$

**Vocabulary**

Divide  
Division  
Factor  
Halve  
Share  
Group  
Divided by  
Divided into  
Divisible by  
Remainder  
Left over  
Quotient  
Inverse

