

Progression through Calculations



Addition

$341 + 276$

Partitioning

$300 + 200 = 500$

$40 + 70 = 110$

$1 + 6 = 7$

$500 + 110 + 7 = \underline{617}$

Expanded Column Method

	H	T	U
	3	4	1
+	2	7	6
<hr/>			7
	1	1	0
	5	0	0
<hr/>			
	6	1	7

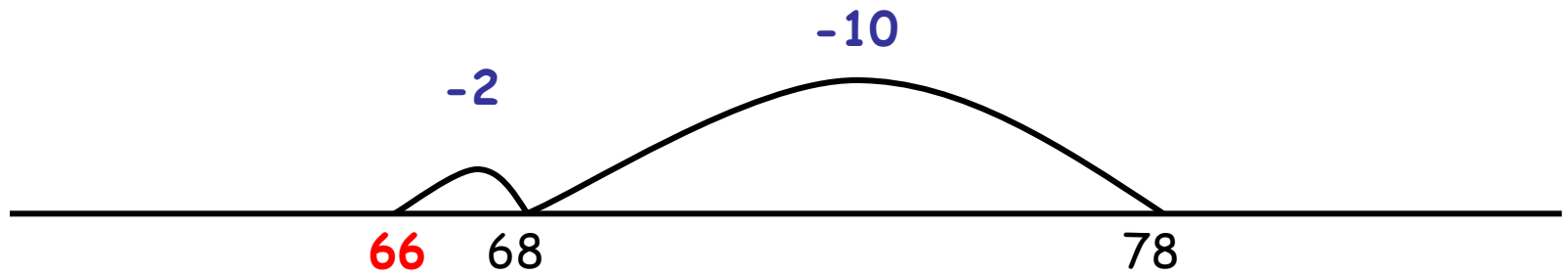
Compact Column Method

	H	T	U
	3	4	1
+	2	7	6
<hr/>			
	6	1	7
<hr/>			
		1	

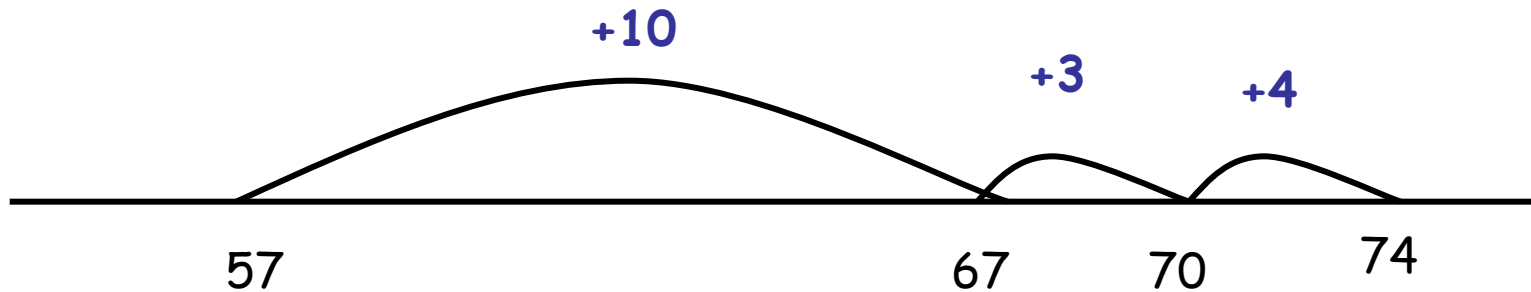
Subtraction

Subtraction using a Number Line

Counting Back: $78 - 12 = 66$



Counting on: $74 - 57 = 17$ ($10 + 3 + 4$)



Subtraction

Column Method without 'Nicking'

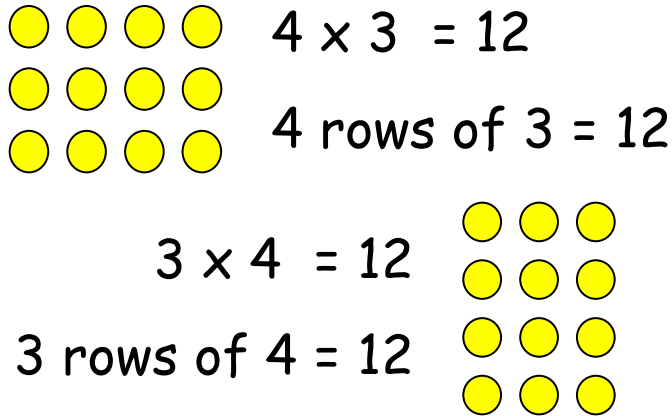
	H	T	U
	3	4	6
-	2	2	1
<hr/>			
	1	2	5
<hr/>			

Compact Column Method: 'Nicking and Sticking'

	H	T	U
	3	8	5
		7	1
-	2	7	6
<hr/>			
	1	0	9
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Multiplication

Using an array



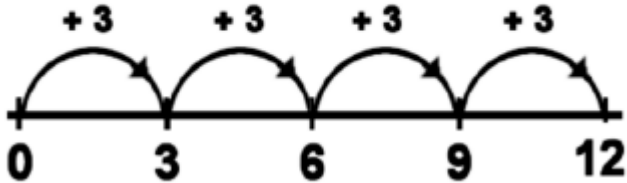
Multiplying by 10 or 100

Th	H	T	U
			3
		3	0

Th	H	T	U
		2	4
2	4	0	0

Repeated addition using a number line

4×3 (4 jumps of 3)



The Grid Method!

24×3

x	20	4
3	60	12

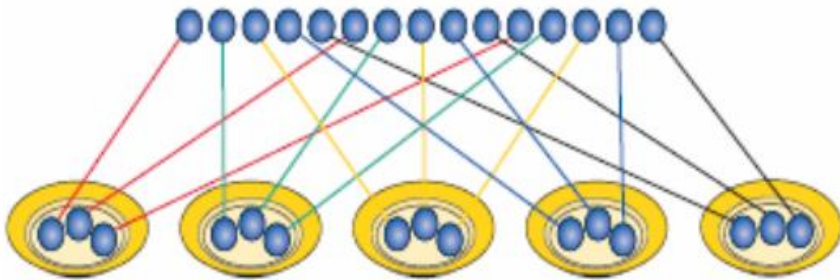
$60 + 12 = \underline{72}$

Division

Division as sharing

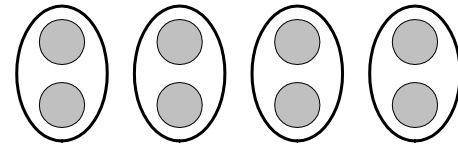
$$15 \div 5$$

15 shared between 5



Division as grouping

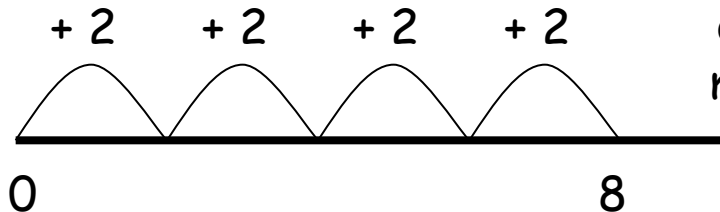
$$8 \div 2$$



Division on a number line

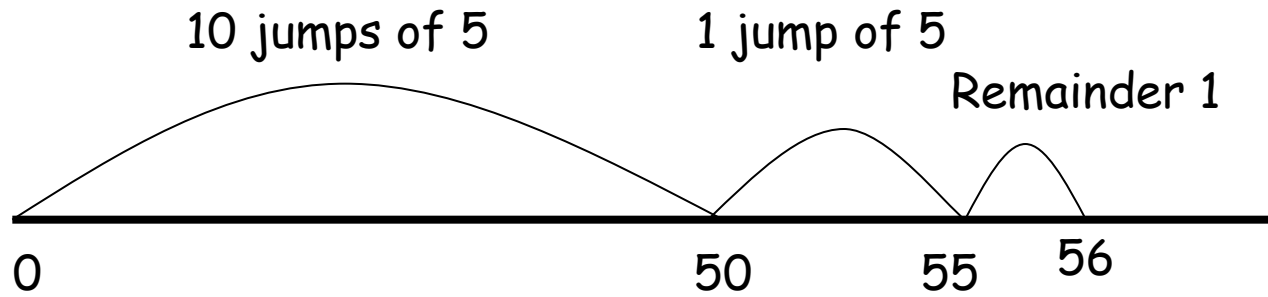
$$8 \div 2$$

4 jumps
of 2 to
make 8.



Division using a number line

$$56 \div 5$$



11 jumps of 5, 1
remaining.

Answer = 11 r 1