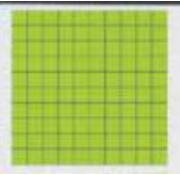
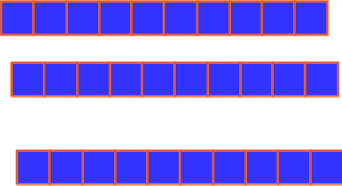
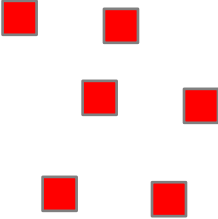

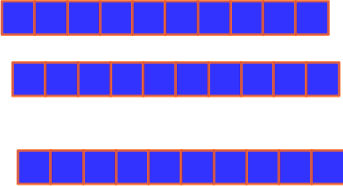

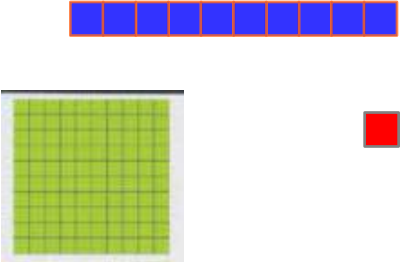


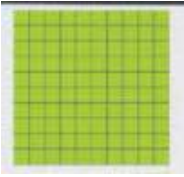
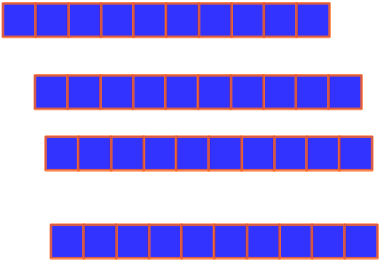
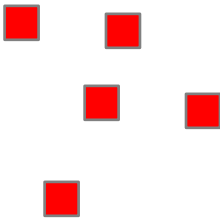

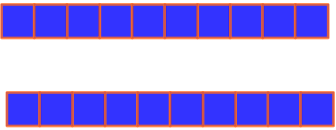
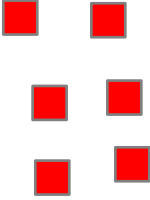
Addition

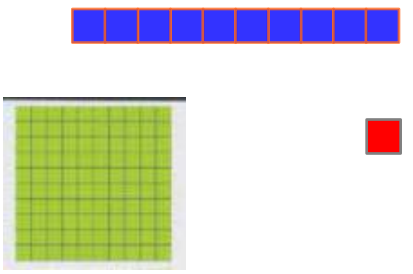
H	T	O
		
		



$$\begin{array}{r}
 \text{H} \quad \text{T} \quad \text{O} \\
 136 \\
 + 132 \\
 \hline
 268
 \end{array}$$

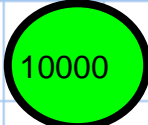
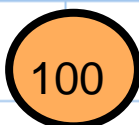
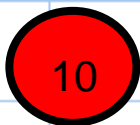
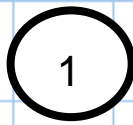
Exchanging with concrete

H	T	O
		
		



H T O
 1 4 5
 + 1 2 6

$5,132 + 654$

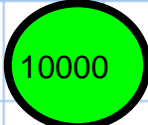
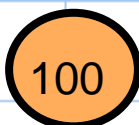
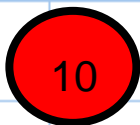
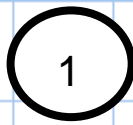


Ten Thousand	Thousands	Hundreds	Tens	Ones

Th	H	T	O
5	1	3	2

+		6	5	4
<hr/>				
<hr/>				

$5,132 + 654$



Ten Thousand	Thousands	Hundreds	Tens	Ones

Th	H	T	O
4	2	5	2

$$\begin{array}{r}
 \\
 + \\
 \hline
 \\
 \hline
 \end{array}$$

$$\begin{array}{r} 234 \\ + 13 \\ \hline \\ \hline \end{array}$$

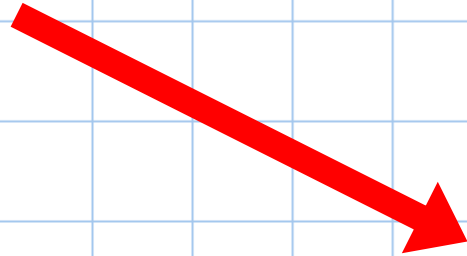
$$\begin{array}{r} 758 \\ + 31 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 831 \\ + 68 \\ \hline \\ \hline \end{array}$$

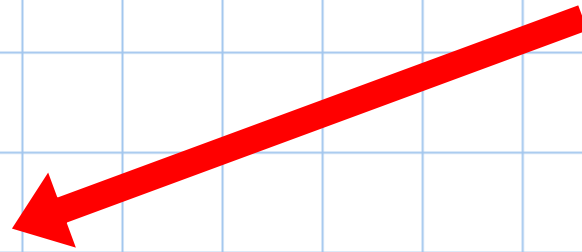
To start with...

Can you notice the progression?

$$\begin{array}{r} 234 \\ + 19 \\ \hline \\ \hline \end{array}$$



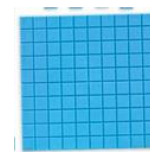
$$\begin{array}{r} 758 \\ + 74 \\ \hline \\ \hline \end{array}$$



$$\begin{array}{r} 836 \\ + 397 \\ \hline \\ \hline \end{array}$$

Subtraction

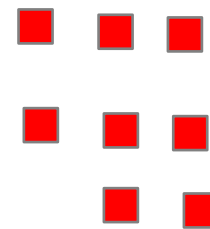
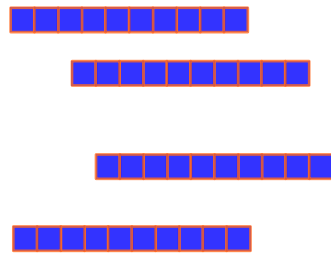
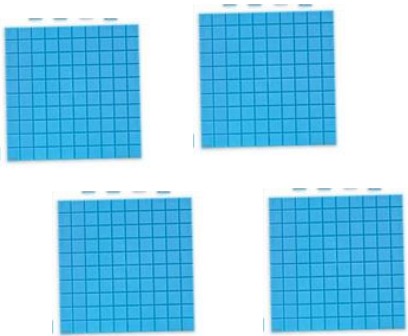
Subtraction



Hundreds

Tens

Ones



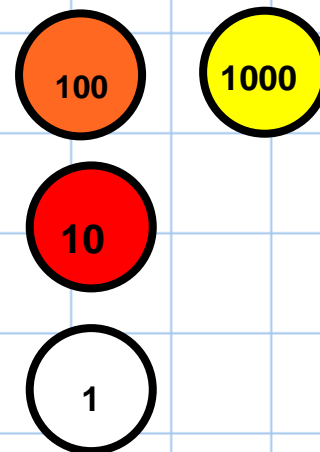
H T O

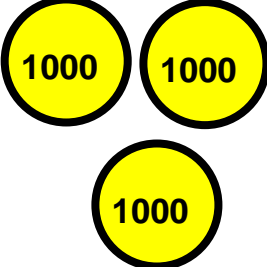
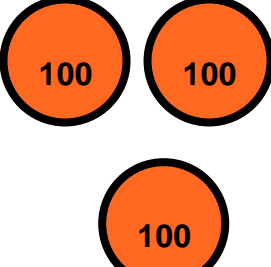

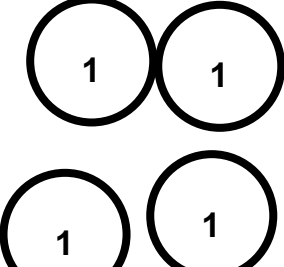
4 4 3

-

1 3 7

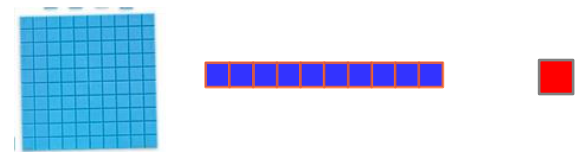


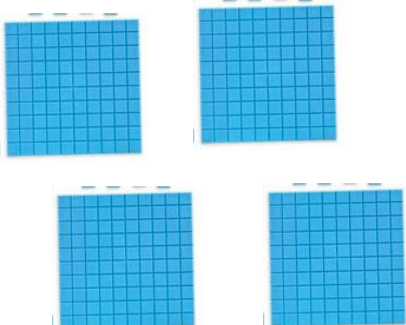
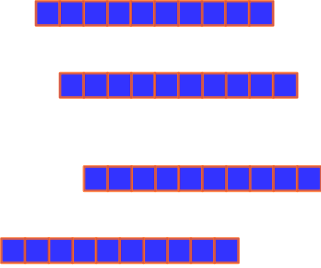



Thousands	Hundreds	Tens	Ones
			

3 3 1 4
1 2 0 1

Subtraction



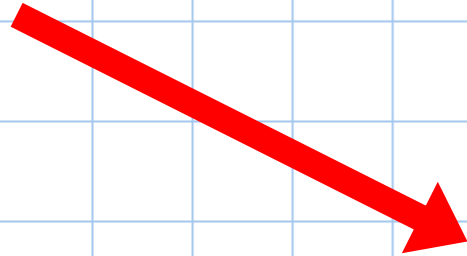
Hundreds	Tens	Ones
		

H T O

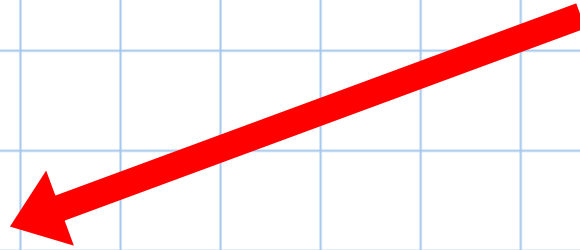
$$\begin{array}{r} 443 \\ - 137 \\ \hline \\ \hline \end{array}$$

Can you notice the progression?

$$\begin{array}{r} 239 \\ - 13 \\ \hline \\ \hline \end{array}$$



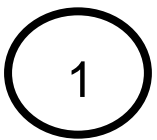
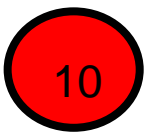
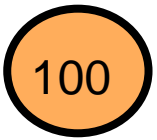
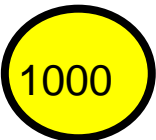
$$\begin{array}{r} 781 \\ - 74 \\ \hline \\ \hline \end{array}$$

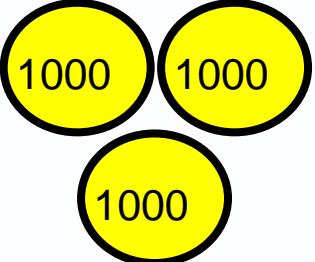
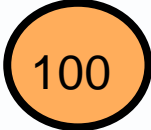
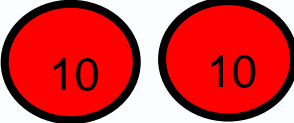
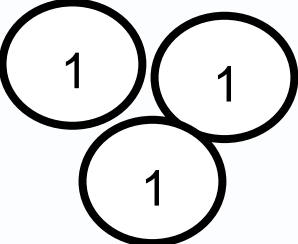


$$\begin{array}{r} 813 \\ - 397 \\ \hline \\ \hline \end{array}$$

Multiplication

3,123 x 3 =



Thousands	Hundreds	Tens	Ones
			

Th H T O

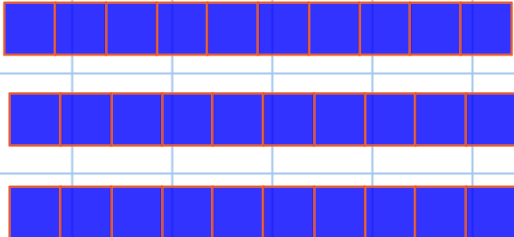
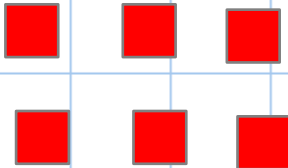
3 1 2 3

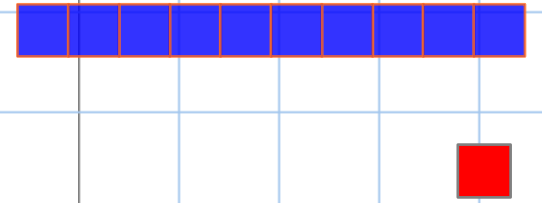
x

3



Multiplication with carrying

Tens	Ones
	

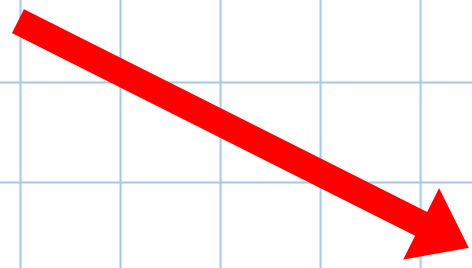


$$\begin{array}{r} 36 \\ \times 2 \\ \hline \end{array}$$



Can you notice the progression?

th	h	t	o
2	4	3	4
x			2
<hr/>			
<hr/>			



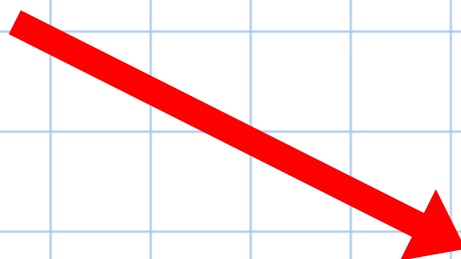
th	h	t	o
3	1	1	2
x			5
<hr/>			
<hr/>			



th	h	t	o
3	5	8	3
x			4
<hr/>			
<hr/>			

Before we then get to long multiplication...

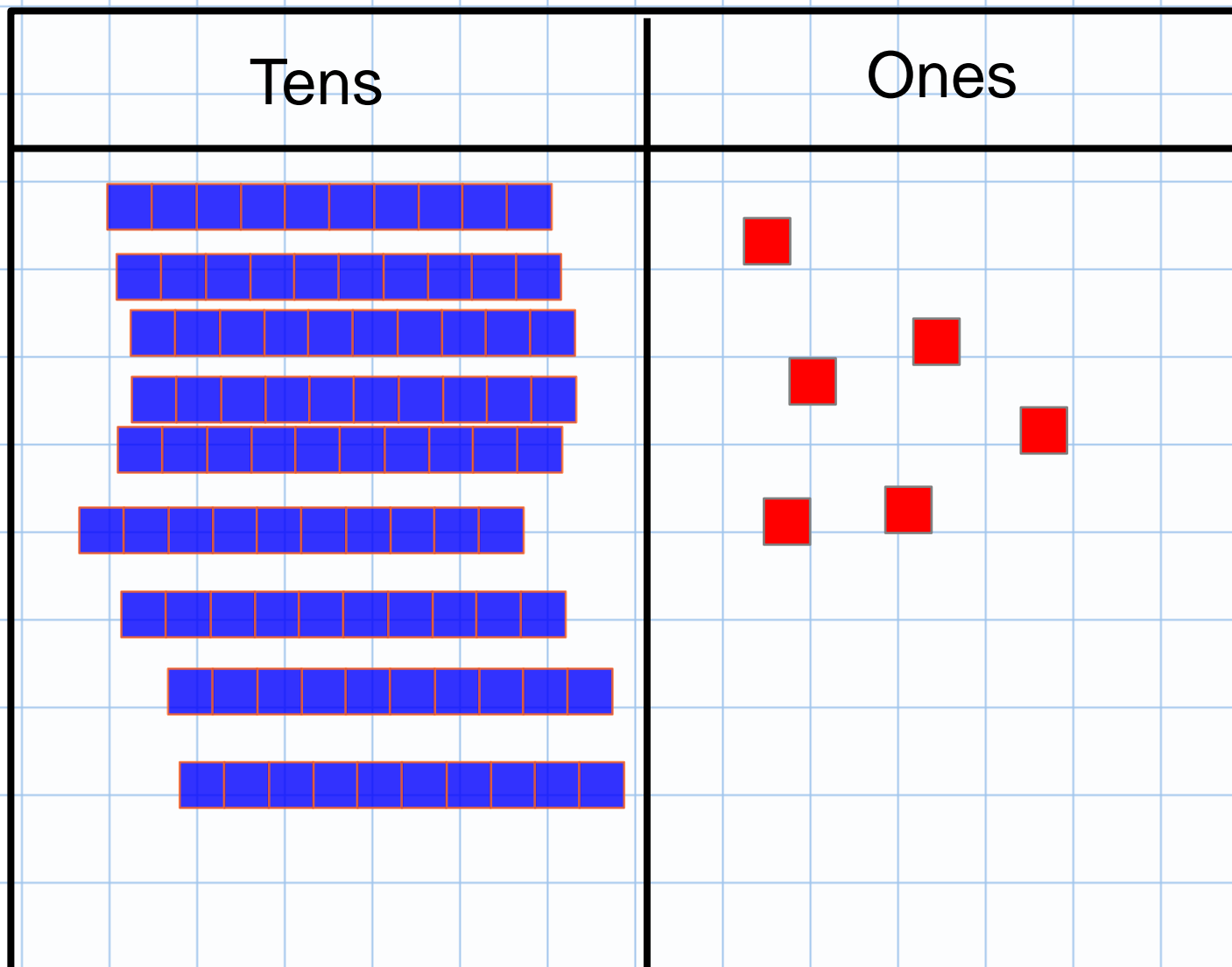
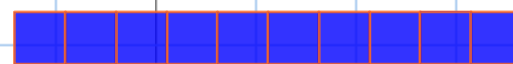
$$\begin{array}{r} \text{th} \quad \text{h} \quad \text{t} \quad \text{o} \\ 4 \quad 3 \quad 2 \quad 2 \\ \times \quad \quad \quad 2 \quad 2 \\ \hline + \\ \hline \hline \end{array}$$



$$\begin{array}{r} \text{th} \quad \text{h} \quad \text{t} \quad \text{o} \\ 4 \quad 7 \quad 1 \quad 3 \\ \times \quad \quad \quad 5 \quad 2 \\ \hline + \\ \hline \hline \end{array}$$

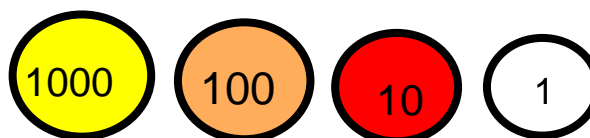
Division

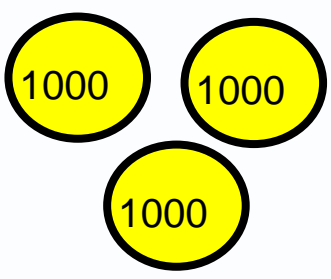
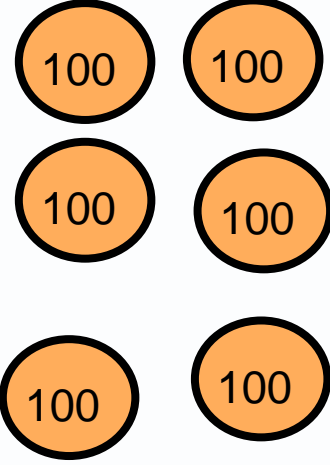
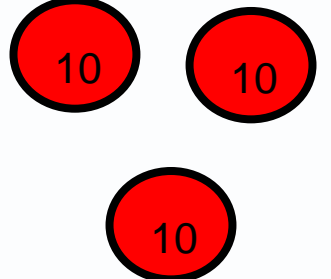
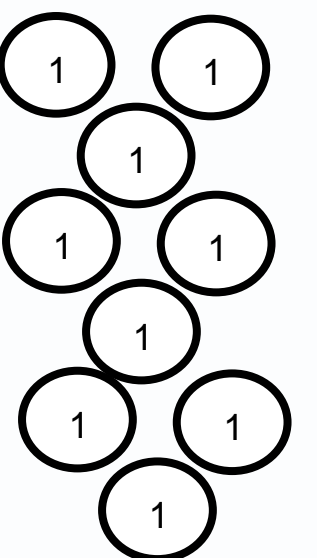
96 into groups of 3



$$3 \overline{) 96}$$


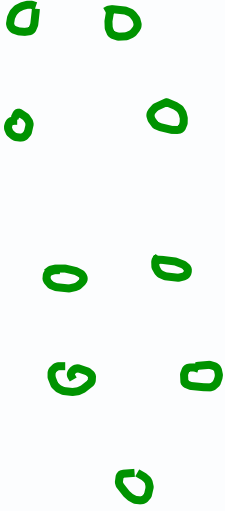


3,639 3 ÷ =



Thousands	Hundreds	Tens	Ones
			

$$3 \overline{) 3639}$$

$6,963 \div 3$

Thousands	Hundreds	Tens	Ones
			

$3 \overline{) 6963}$

create factbox

$$12 \overline{) 80}$$

$$1 \times 12 = 12$$

$$2 \times 12 = 24$$

$$3 \times 12 = 36$$

$$4 \times 12 = 48$$

$$5 \times 12 = 60$$

$$6 \times 12 = 72$$

$$7 \times 12 = 84$$

$$8 \times 12 = 96$$

$$9 \times 12 = 108$$

$$10 \times 12 = 120$$

$$11 \times 12 = 132$$

$$12 \times 12 = 144$$

$$12 \overline{) 936}$$

