

Multiplication



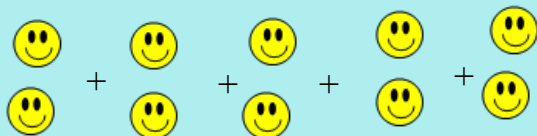
Nov 12-14:55

Early Multiplication

Practical activities

Counting on and back in 2s, 5s and 10s

It is important that the children understand that multiplication is repeated addition - through the use of arrays.



$$2 + 2 + 2 + 2 + 2 = 10$$

$$5 \text{ ' lots of ' } 2 \\ 5 \times 2$$



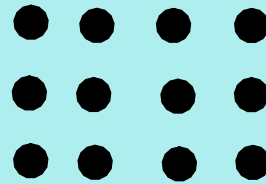
$$5 + 5 = 10$$

$$2 \text{ ' lots of ' } 5 \\ 2 \times 5$$

May 2-17:11

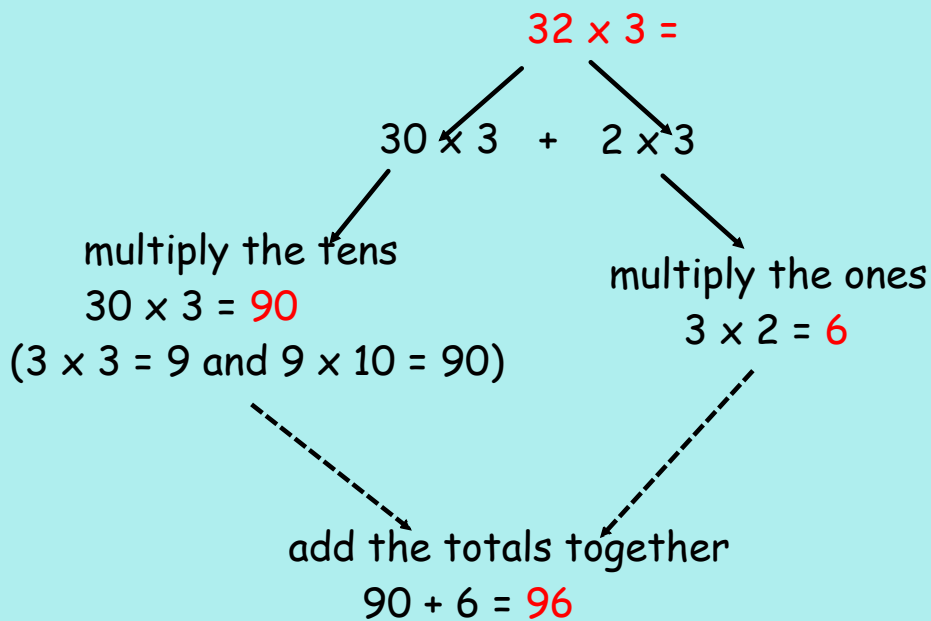
Looking at arrays

$$4 \times 3 =$$



Jan 30-05:02

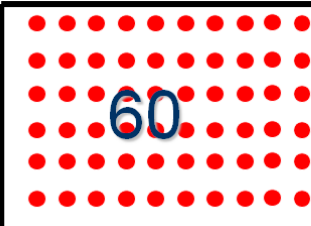

Children use partitioning when multiplying larger numbers



Mar 2-12:50

From Arrays to the Grid Method

Grid method of multiplication

	10	3	
6			60 + 18 = 78
	60	18	

so $6 \times 13 = 78$

Nov 12-14:47

Introducing the grid method

$13 \times 6 =$

$$\begin{array}{r|c|c} \times & 10 & 3 \\ \hline 6 & & \end{array}$$

Multiply the largest number first and write the answer in the box underneath:

$$\begin{array}{r|c|c} \times & 10 & 3 \\ \hline 6 & 60 & 18 \end{array} \quad 60 + 18 = 78$$

Multiply the next number and write the answer in the bo

$$\begin{array}{r|c|c} \times & 10 & 3 \\ \hline 6 & 60 & 18 \end{array}$$

Total the numbers and write the answer at the side:

$$\begin{array}{r|c|c} \times & 10 & 3 \\ \hline 6 & 60 & 18 \end{array} = 78$$

Nov 15 - 10:25

The size of the grid increases as the size of the numbers increase:

$$72 \times 38 =$$

Both numbers are partitioned into tens and ones before multiplying.
 Multiply by the tens first:

x	70	2	
30	2100		
8			

x	70	2	
30	2100	60	
8			

Multiply by the ones (units)

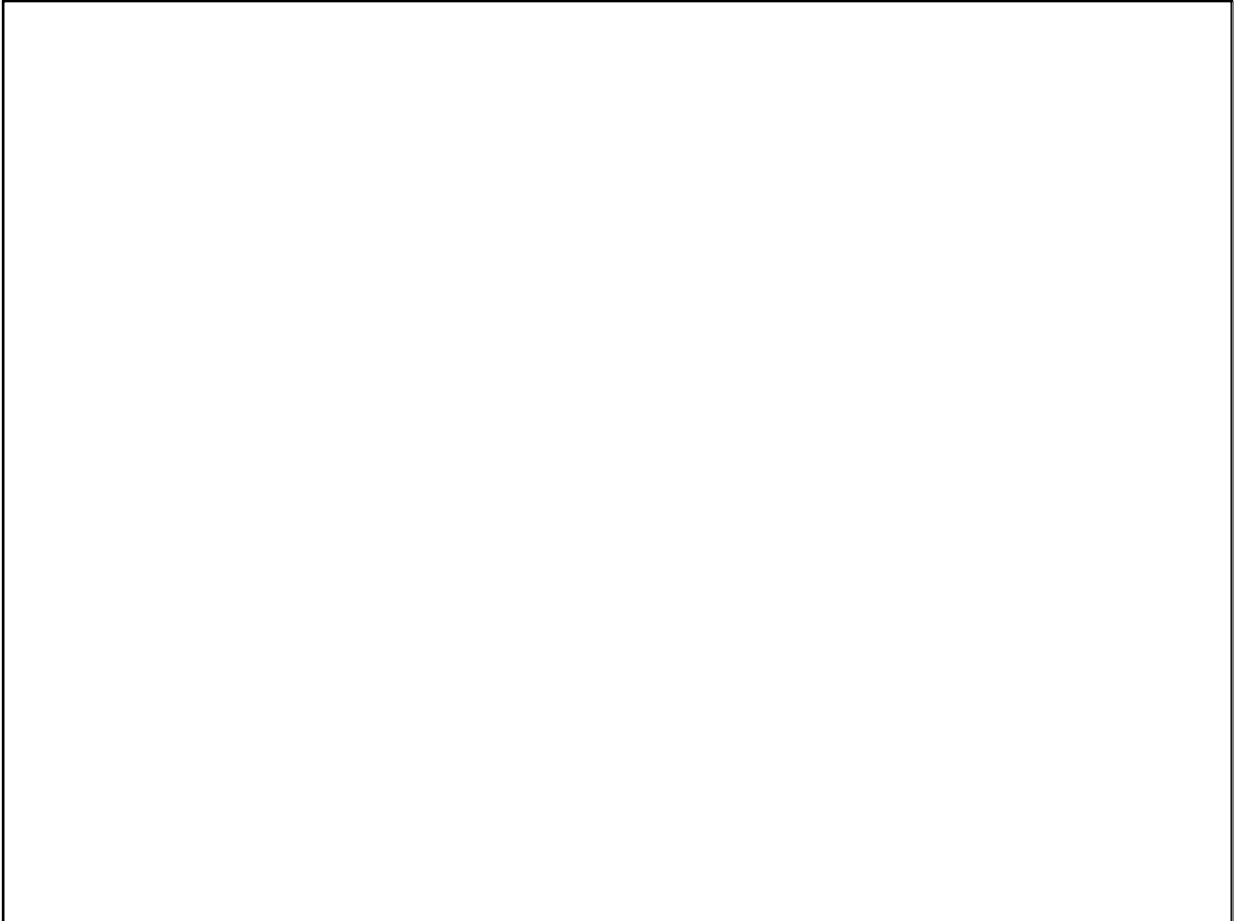
x	70	2	
30	2100	60	
8	560		

x	70	2	
30	2100	60	
8	560	16	

Total the rows

x	70	2		
30	2100	60	=	2160
8	560	16	=	576
				2736

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Oct 5-14:59

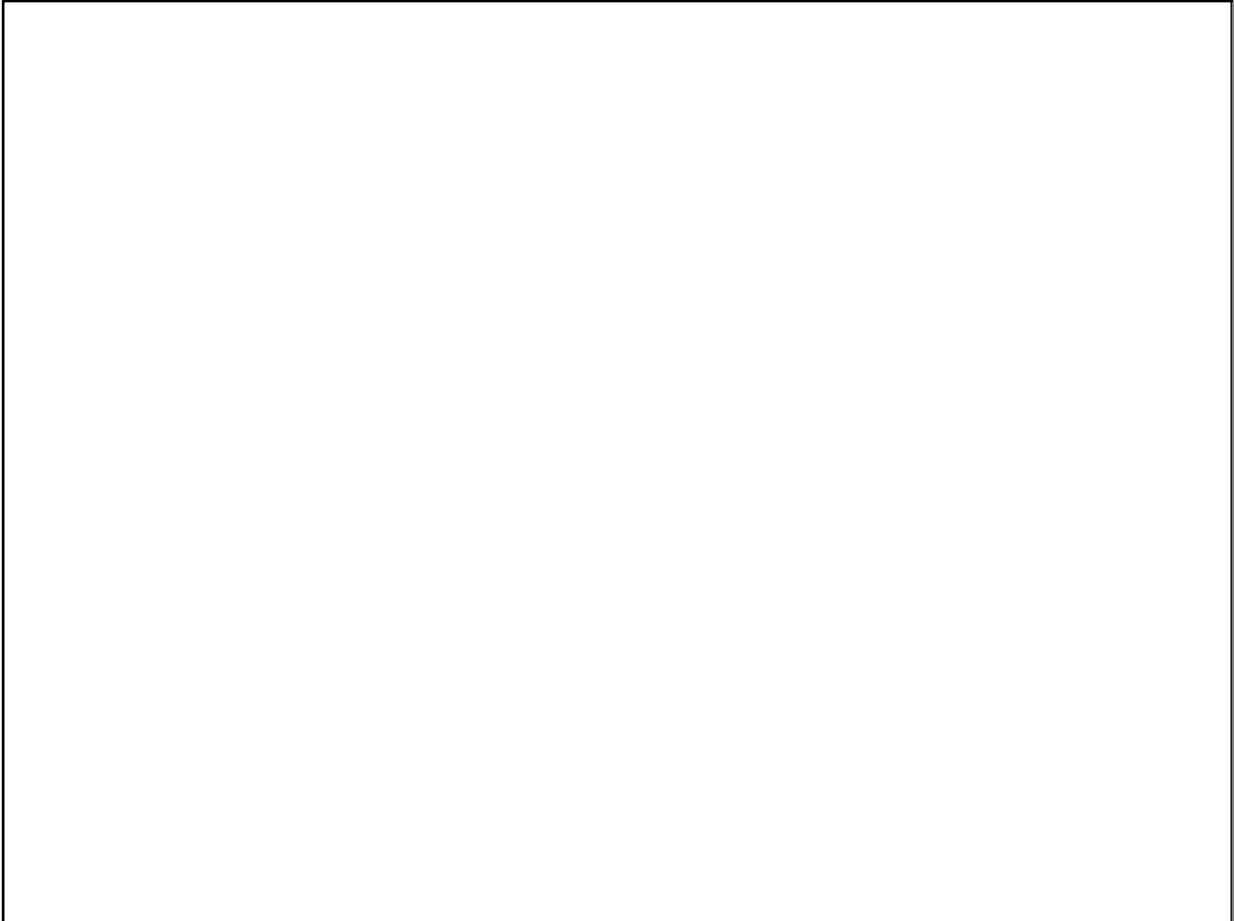
Long Multiplication Column Method

In year 5 and 6 children will begin working on formal column methods of short and long multiplication.

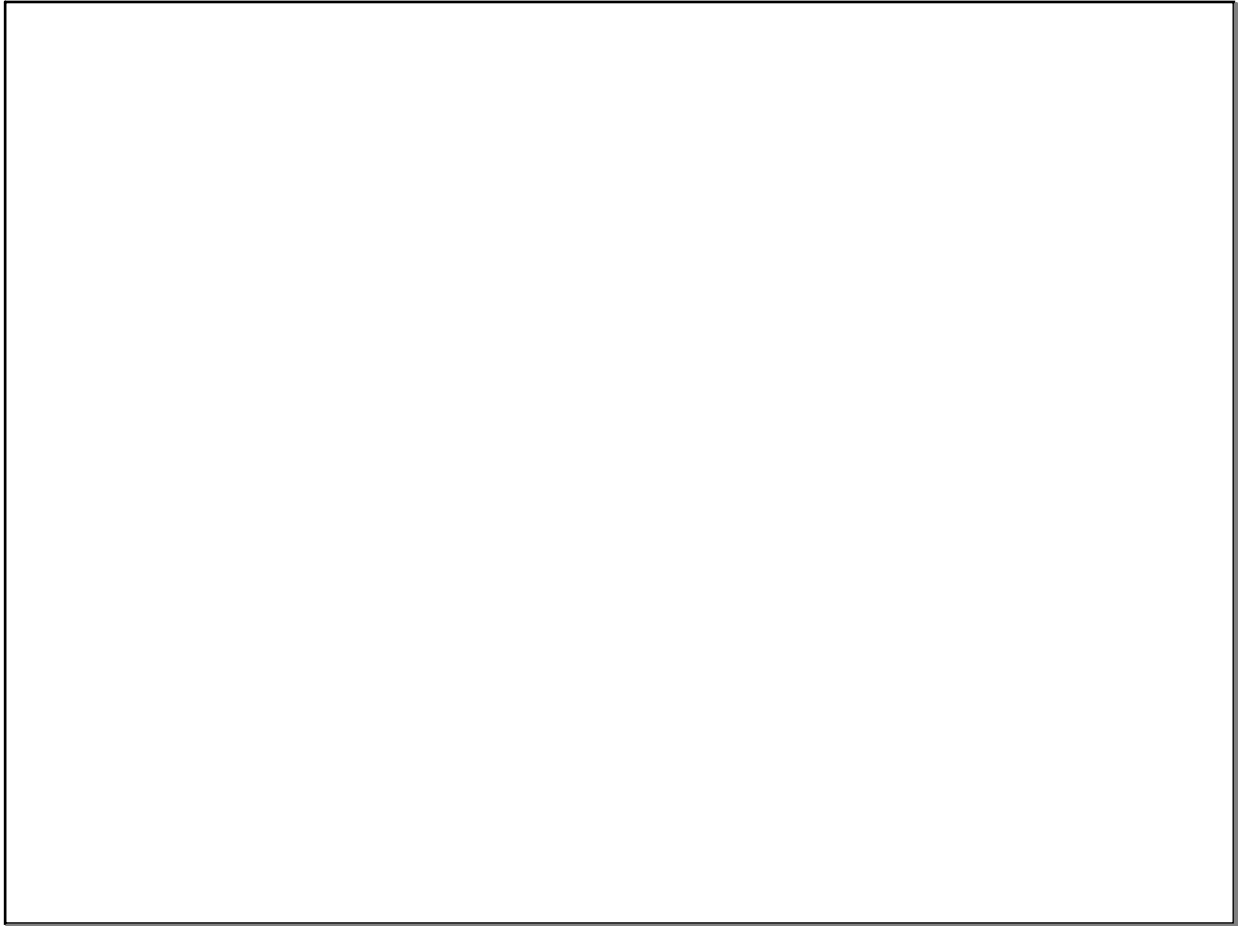
$$\begin{array}{r} 65 \\ \times 3 \\ \hline 195 \end{array}$$

$$\begin{array}{r} 58 \\ \times 43 \\ \hline 174 \\ 2320 \\ \hline 2494 \end{array}$$

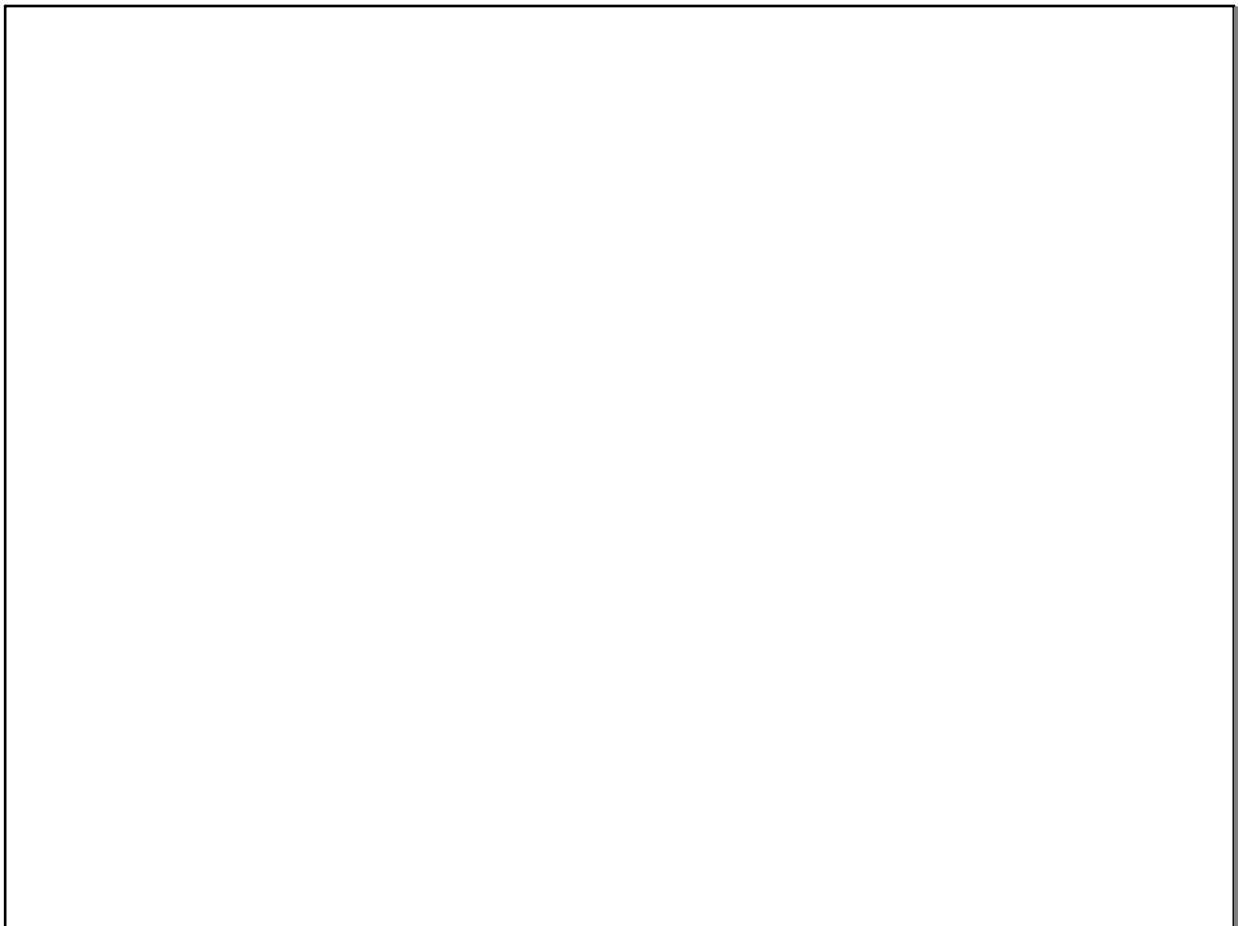
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Nov 18-09:50



Nov 18-09:41



Nov 19-00:05