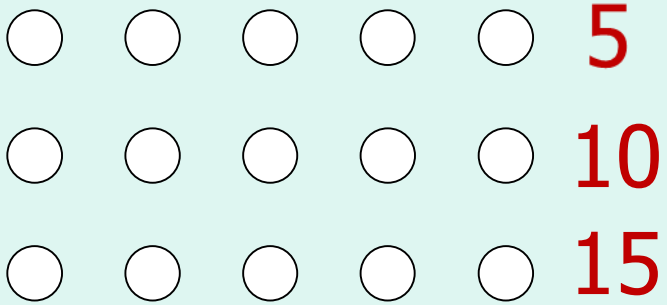
Pegasus Calculation Policy for multiplication

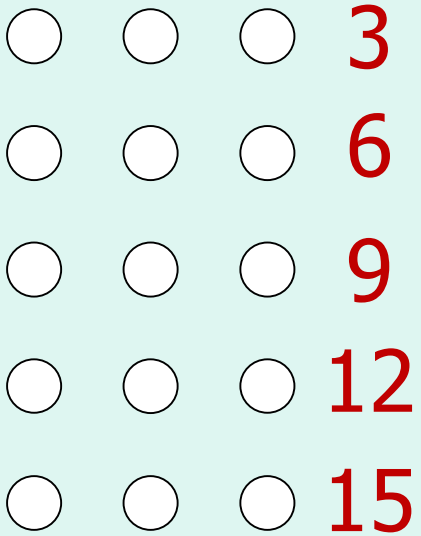
Year 2

Arrays

3 x 5 = 15

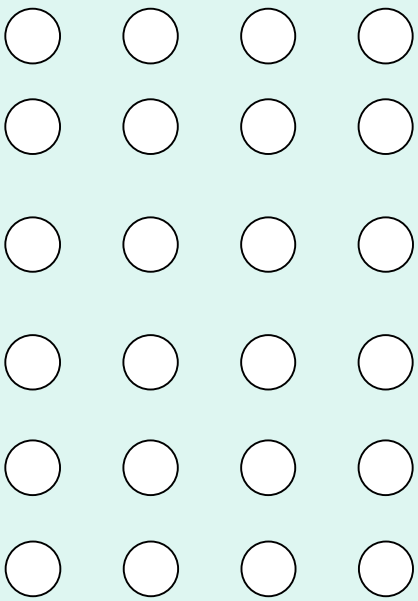


5 x 3 = 15



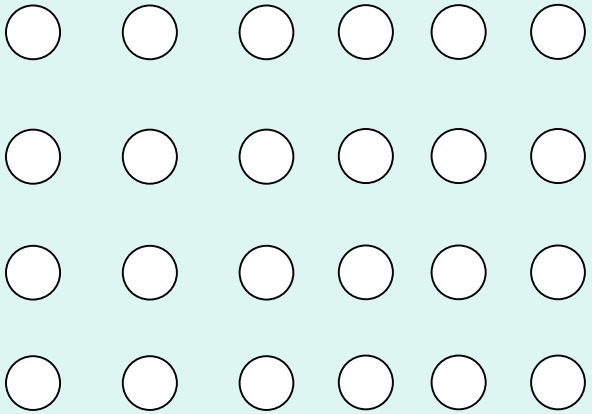
Arrays – Opportunity to participate

4 x 6 = 24



4
8
12
16
20
24

6 x 4 = 24



6
12
18
24

Year 3

2 digit by 1 digit grid multiplication

23 x 8 = 184

x	20	3	
8	160	24	= 184

Children add the totals

An opportunity for you to participate

36 x 5 = 180

x	30	6	
5	150	30	= 180

Year 4

Expanded method of multiplication

	TO	
	23	
x	8	
	24	(8 x 3)
	160	(8 x 20)
	184	

Expanded method of multiplication

	HTO	
	532	
x	6	
	12	(6 x 2)
	180	(6 x 30)
	3000	(6 x 500)
	3192	

An opportunity to participate

	HTO	
	358	
x	4	
	32	(4 x 8)
	200	(4 x 50)
	1200	(4 x 300)
	1432	

Expanded multiplication without brackets

	H	T	O
	2	6	2
x			6
			12
		360	
	1200		
	1572		

Expanded multiplication without brackets – Opportunity to participate

	H	T	O
	3	4	1
x			4
			4
		1	6	0
	1	2	0	0
	1	3	6	4

Year 5

Short multiplication

1 3 2

4387

x 4

17548

An opportunity to participate

$$\begin{array}{r} {\scriptstyle 5}\,58 \\ \times\ 7 \\ \hline 406 \\ \hline \end{array}$$

Long multiplication

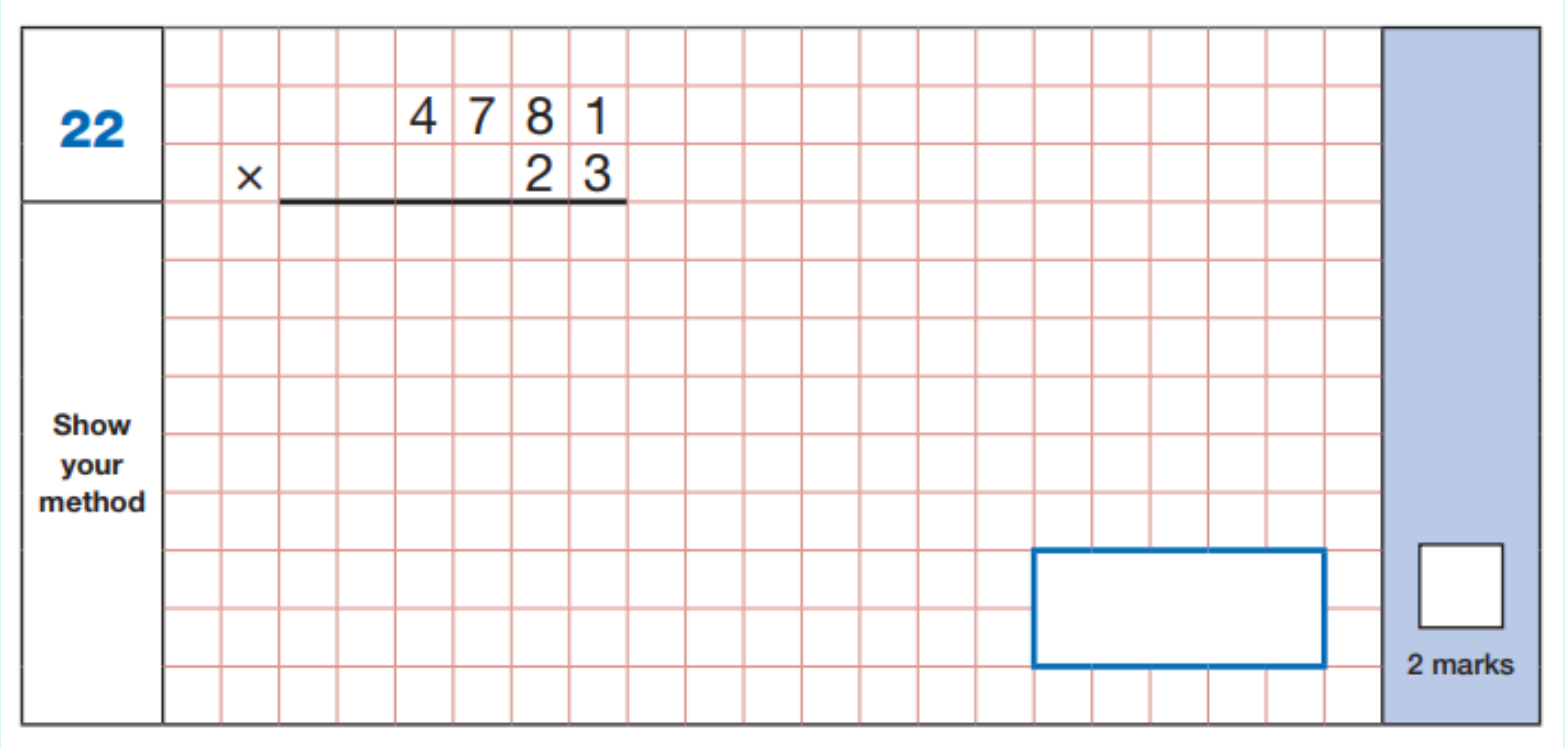
$$
\begin{array}{r}
{\scriptstyle 4} \\
75 \\
\times\ 19 \\
{\scriptstyle 1} \\
\hline
675 \\
750 \\
\hline
1425 \\
\hline
\end{array}
$$

An opportunity to participate

$$
\begin{array}{r}
{\scriptstyle 1} \\
36 \\
\times\ 53 \\
\hline
108 \\
{\scriptstyle 3} \\
1800 \\
\hline
1908 \\
\hline
\end{array}
$$

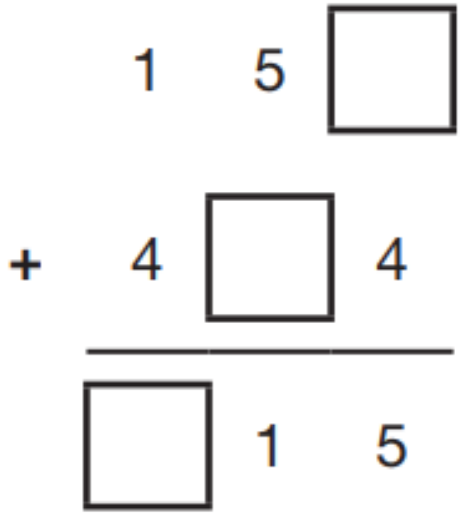
Year 6

Example from the Year 6 SATS arithmetic test 2017



Questions can be asked in different ways

3 Write the three missing digits to make this **addition** correct.



2 marks

Further information

- http://www.toolsofthemind.org/philosophy/scaffolding/

  More information on the Zone of Proximal Development
- http://toolkit.mathematicsmastery.org/cpd_modules/view/27

  Differentiation using the key principles Of Mathematics Mastery
- https://www.ncetm.org.uk/resources/45776

  A blog on the subject of differentiation by depth – Charlie Stripp
- https://www.ncetm.org.uk/resources/46034

  Jane Jones' HMI OFSTED, response to Charlie Stripp
- http://nrich.maths.org/2473

  NRICH article on Mathematical Thinking