

Corbettmaths - Multiplication using the grid method

Introduction Activity 1:

Copy and complete each grid below. Once you have found the missing numbers, add all the numbers in the grid, using the column method, to calculate the answer

1)

$$25 \times 19$$

	20	5
10	200	
9		45

2)

$$41 \times 27$$

	40	1
20		20
7	280	

3)

$$126 \times 34$$

	100	20	6
30	3000	600	
4			24

4)

$$208 \times 71$$

	200	8
70		
1		

Activity 1:

Work out the following multiplications, using the grid method

- | | | | |
|--------------------|--------------------|---------------------|---------------------|
| 1) 16×3 | 2) 17×5 | 3) 23×4 | 4) 32×6 |
| 5) 19×8 | 6) 73×3 | 7) 92×4 | 8) 23×9 |
| 9) 125×3 | 10) 253×6 | 11) 340×6 | 12) 203×7 |
| 13) 828×6 | 14) 901×9 | 15) 1372×3 | 16) 2198×6 |

Activity 2:

Work out the following multiplications, using the grid method

- | | | | |
|---------------------|---------------------|---------------------|---------------------|
| 1) 34×13 | 2) 18×24 | 3) 35×16 | 4) 42×57 |
| 5) 93×28 | 6) 82×27 | 7) 90×22 | 8) 55×55 |
| 9) 124×13 | 10) 224×16 | 11) 316×12 | 12) 407×23 |
| 13) 835×47 | 14) 473×52 | 15) 108×98 | 16) 283×91 |

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Activity 3:

Work out the following multiplications, using the grid method

- | | | | |
|---------------------|---------------------|---------------------|----------------------|
| 1) 128×235 | 2) 382×921 | 3) 803×205 | 4) 382×300 |
| 5) 209×903 | 6) 2819×35 | 7) 4716×83 | 8) 2837×712 |

Activity 4:

- 1) Nicola runs 5 laps of an indoor jogging track. The track is 142 metres. How far has Nicola run in total?
- 2) An oak dining room chair is £79. How much would six chairs cost?
- 3) How many days are there in 23 weeks?
- 4) There are twelve packets of crisps in a multipack. How many packets are in 16 multipacks?
- 5) Jemma and Harry are sponsored to take part in a 'read-a-thon.'

Jemma is sponsored £4 per book she reads by her parents.

Harry is sponsored £3 per book he reads by his parents.

Jemma reads 17 books and Harry reads 23 books.

How much money do they raise in total?

- 6) Gregory studies 25 minutes per night for 3 weeks for an upcoming exam. How long, in minutes, does he revise for the exam?
- 7) There are 24 cans of lemonade in a crate. How many cans would be in 148 crates?

Activity 5:

Correct Emma's and Hannah's work and explain to them what they should do next time

Emma

92×43			
2	90	40	$\begin{array}{r} 270 \\ 180 \\ 120 \\ 80 \\ \hline 650 \end{array}$
	180	80	
	270	120	

Hannah

92×43			
40	90	2	$\begin{array}{r} 36000 \\ 2700 \\ 80 \\ 6 \\ \hline 39506 \end{array}$
	36000	80	
	2700	6	

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Extension Activity 1:

Using the grid method, investigate this pattern:

$$\begin{aligned}1 \times 1 &= \\11 \times 11 &= \\111 \times 111 &= \\1111 \times 1111 &= \\11111 \times 11111 &= \end{aligned}$$

Without working it out, what would the answer to 1111111×1111111 be?

Describe the pattern....

Would the pattern ever end? If so, when? and why?

Extension Activity 2:

Using the grid method, investigate this pattern:

$$\begin{aligned}9 \times 9 &= \\99 \times 99 &= \\999 \times 999 &= \\9999 \times 9999 &= \\99999 \times 99999 &= \end{aligned}$$

Without working it out, what would the answer to 9999999×9999999 be?

Describe the pattern....

Would the pattern ever end? If so, when? and why?

Extension Activity 3:

Using the grid method, investigate this pattern:

$$\begin{aligned}12345679 \times 9 &= \\12345679 \times 18 &= \\12345679 \times 27 &= \end{aligned}$$

Without working it out, what would the answer to 12345679×72 be?

Describe the pattern....

Would the pattern ever end? If so, when? and why?