29.4.2020

Can I use formal written methods for multiplication?

Today we are going to revise formal written methods for short and long multiplication. You should all be familiar with short multiplication methods and be using the formal written method confidently. Long multiplication was just introduced a few weeks before schools closed, so you might need a reminder and some practice.

Questions on next page … if you need more practice with short multiplication, do Marvellous

1

Place holder

(217 x 50)

(217 x 9)

1

2

1

8

0

3

**Formal Written Method – long multiplication**

Step one: set out your multiplication in the formal written method, remembering to leave a line for your carried numbers. Start by multiplying the ones number by the multiplier as you would for short multiplication. Carry any digits needed and add them onto the next place value column:

Step two: before multiplying by the tens multiplier (5 in this example), we need to remember to put a zero place holder in the ones column of the answer box – see below:

Finally, add the 2 rows together to give the answer (in green above).

Add 2 rows together

1 0

8

3

5

0

1

6

1 9 5 3

*x*

5

9

9

7

1

2

1

1

6

1 9 5 3

*x*

1

5

1

7

1

2

1 9

1

6

5

3

*x*

9

7

1

2

**Formal Written Method – short multiplication**

Step one: set out your multiplication in the formal written method, remembering to leave a line for your carried numbers. Multiply the ones number by the multiplier:

Step two: then move onto the tens number and multiply it by the multiplier. Add any digits that have been carried over and carry any extra digits if needed:

Step three: continue moving across the top digits until you have multiplied all the numbers.

Cross out the carried number once you have added it on.

5

3

6

*x*

9

7

1

2

6

3

Leave line for carried numbers

Multiplier

9

*x*

7

2



Answers

Fluent in Five: 1) 391 2) 3,188 3) 22 4) 106r1 or 106.14 5) 86.8

Marvellous: 1) 3,519 2) 44,615 3) 22,645 4) 79,614 5) 20,320

Magnificent: 1) 160,975 2) 487,968 3) 578,678 4) 321,878 5) 238,524

Mind-blowing: 1) missing digit = 4 / answer = 5148 2) missing digit = 4 / answer = 20868 3) missing digit = 3 / answer = 7688 4) missing digit = 6 / answer = 15088 5) missing digit = 5 / answer = 22464

Marvellous

1. 391 x 9 2) 8923 x 5 3) 4529 x 5 4) 8846 x 9 5) 2540 x 8

Magnificent

1. 3425 x 47 2) 5083 x 96 3) 6502 x 89 4) 9467 x 34 5) 4587 x 52

Mind blowing: Find missing digit, then complete calculation