Solve problems with multiplication
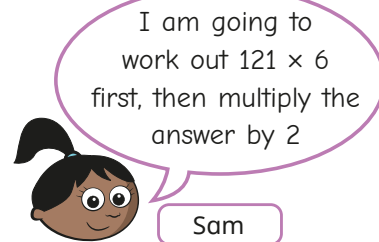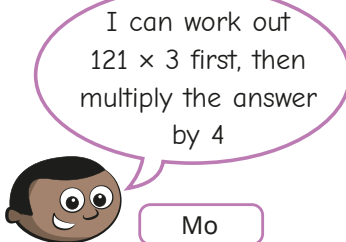
White Rose MATHS

1 **a)** Work out 51 × 100

b) Use the long multiplication method to work out 51 × 99

c) What do you notice about your answers to part a) and b)?

2 Work out the multiplications.

a) 32 × 99   **b)** 21 × 99   **c)** 21 × 999   **d)** 99 × 125

3 Mo and Sam are using factor pairs to work out 121 × 12

I can work out 121 × 3 first, then multiply the answer by 4

Mo

I am going to work out 121 × 6 first, then multiply the answer by 2

Sam

Complete Mo and Sam's workings.

| 121 × 3 = ___ |
| ___ × 4 = ___ |
| So 121 × 12 = ___ |

| 121 × 6 = ___ |
| ___ × 2 = ___ |
| So 121 × 12 = ___ |

4 Find all the factor pairs of each number.

a) 8   **b)** 15   **c)** 18   **d)** 27

5 Use factor pairs from question 4 to work out the multiplications.

a) 235 × 8   **b)** 314 × 15   **c)** 18 × 152   **d)** 27 × 301

6 A school serves 134 dinners every day.

There are 8 weeks in a half term.

How many dinners does the school serve in a half term?

7 Kim is working out 123 × 32

I can work out 123 × 30 and 123 × 2, and then add the two products together.

Use Kim's method to work out the multiplications.

a) 123 × 32   **b)** 263 × 21

8 A lorry travels 123 km each day for 43 days.

A train travels 132 km each day for 34 days.

a) Which vehicle travels further?

b) How much further does it travel?

9 Jack has worked out that 1,462 × 27 = 39,474

a) Explain to a partner how Jack can use this fact to help work out the multiplications.

| 1,462 × 26 | | 1,462 × 28 | | 1,461 × 27 | | 1,461 × 28 |

b) Work out the answer to each multiplication.

10 Are the statements true or false?

a)
258 × 360 = 2,580 × 36

b)
134 × 23 + 12 = (134 + 12) × 23

Explain your answers to a partner.