

Max's Multiplication Workshop: Mastering Long Multiplication

Learning objective: To multiply numbers up to four digits by a two-digit number using the formal written method of long multiplication.

Help Max the monkey solve these math puzzles! Use the space provided to set out your long multiplication calculations using the formal written method. Remember to include your 'placeholder zero' when multiplying by the tens digit and show your addition clearly at the end.

Word bank: multiplicand · multiplier · product · placeholder · regrouping · column · tens · units

1. Max is buying 14 bags of monkey nuts for his friends. If each bag costs £23, use long multiplication to calculate the total cost. Show your working out: (3 marks)

2. A fruit crate holds 45 bunches of bananas. If an orchard produces 26 crates, how many bunches of bananas are there in total? Set out your calculation: (3 marks)

3. Explain why it is important to place a '0' in the units column before you start multiplying by the tens digit: (2 marks)

4. Max has 32 boxes of puzzles, and each box contains 124 pieces. How many puzzle pieces does he have in total? Show your method: (3 marks)

5. Create your own long multiplication word problem involving a trip to the market where items cost £34 each and you need to buy 15 of them. Solve it: (4 marks)

Extension challenge: Try to solve 256×38 using the long multiplication method. Can you check your answer by using the inverse operation (division) or by estimating first to see if your answer is reasonable?