

Max's Magnificent Market Maths

Learning objective: To multiply numbers up to 4 digits by a 2-digit number using the formal written method of long multiplication.

Help Max the monkey calculate the costs for the annual Forest Fair. Use your long multiplication skills to solve these problems. Remember to include your place value holder (zero) when multiplying by the tens digit!

Max is organising the Forest Fair and needs to order supplies for all his friends. He needs to buy 24 crates of star-fruit, with each crate costing £135. He also needs to order 36 sets of colourful bunting, with each set costing £248. Finally, he is ordering 15 boxes of magic ink for Leo's poetry workshop, costing £472 per box. Max is very busy ensuring the budget is accurate before he places the final order.

Word bank: multiplicand · multiplier · product · place value · partitioning · calculation · regrouping · estimate

1. Calculate the total cost of the 24 crates of star-fruit at £135 each. Show your working out clearly. (3 marks)

2. How much will 36 sets of bunting cost if each set is £248? Explain how you used long multiplication to reach your total. (3 marks)

3. Max has a budget of £8,000 for these three items. Calculate the total cost for all three supplies and justify whether Max has enough money. (4 marks)

4. If the price of the magic ink increased by £15 per box, how much more would the total order for 15 boxes cost? Show your calculation. (3 marks)

5. Compare and contrast the effect of multiplying by 24 versus multiplying by 36. Why does the product increase significantly? (2 marks)

6. What might happen if Max forgot to include the place value holder (zero) in his second row of multiplication? Explain the impact on the final total. (2 marks)

Draw: Draw a scene at the Forest Fair showing Max the monkey holding a clipboard, surrounded by crates of fruit and colourful bunting hanging from the trees.



Extension challenge: Create your own 'Fairground Challenge'. Invent a new item for the fair, give it a price over £500, and decide on a quantity between 20 and 50. Ask a partner to calculate the total cost using long multiplication, then write a short paragraph explaining how they checked their answer using estimation.