

Max's Magnificent Market Challenge: A Grade 3 Addition Assessment

Learning objective: To demonstrate fluency in column addition, mental strategies, and solving multi-step problems involving money and four-digit integers.

Read each question carefully. Show your working out clearly, as marks are awarded for your method even if the final answer is slightly inaccurate. Max the monkey is counting his market earnings and needs your expertise to ensure his totals are correct.

Max the monkey has been selling organic fruit at the local village market. He needs to calculate his earnings and prepare for next week's stock. He has a box containing £2,450, and he just sold a crate of mangoes for £1,875. Meanwhile, Zara the zebra has donated £1,342 to Max's community garden fund, and Kit the fox contributed £2,658 to help buy new seeds.

Word bank: column addition · regrouping · exchange · total · sum · place value · estimate · calculation

1. Using column addition, calculate the total sum of the money in the box (£2,450) and the mango sales (£1,875). (2 marks)

2. Max wants to know the combined total donated by Zara (£1,342) and Kit (£2,658). Show your column addition method. (2 marks)

3. Max says: 'If I add 3,456 and 2,987, the answer must be less than 6,000 because 3,000 plus 2,000 is 5,000.' Is Max correct? Justify your answer using your knowledge of place value. (3 marks)

4. Complete the missing digits in this calculation: $4 _ 67 + 23 _ 4 = 7101$. (3 marks)

5. Compare and contrast the strategies of 'partitioning' and 'column addition'. When might you choose to use one over the other? Give an example. (4 marks)

6. Max plans to spend £3,450 on new tree saplings, £1,275 on soil, and £890 on gardening tools. What is the total cost of his shopping list? Show your working clearly. (6 marks)

7. Explain why it is vital to align the digits correctly in their columns when performing addition involving four-digit numbers. What might happen if a digit is placed in the wrong column? (5 marks)

Draw: Draw a visual representation of the number 2,345 using base-ten blocks (thousands, hundreds, tens, and ones) to show your understanding of place value.



Extension challenge: Max has a secret savings jar. He adds £1,500 on Monday, £1,250 on Tuesday, and £1,750 on Wednesday. If he needs £5,000 to reach his goal, how much more does he need? Create your own 'Greater Depth' word problem for a friend to solve involving a four-digit addition total. Total: /25