

# Max's Mental Math Challenge: The Marketplace Expedition

*Learning objective: To apply mental calculation strategies, including partitioning, rounding, and adjusting, to solve real-world problems involving money and measure.*

Help Max the monkey calculate the costs for his marketplace adventure. Use your mental math skills to solve these problems without writing down long formal column methods. Show your working out in the boxes provided to explain how you reached your answer.

*Word bank: partitioning · rounding · adjustment · estimate · difference · total · calculation · strategy*

**1. Max buys 3 bags of apples at £1.99 each. Explain the rounding strategy you would use to calculate the total cost mentally. (3 marks)**

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**2. Max has £10.00. He spends £4.50 on bananas and £2.25 on nuts. Justify how you can calculate his remaining change using a 'counting on' strategy. (3 marks)**

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**3. Compare and contrast the strategies of partitioning numbers versus rounding to the nearest pound. Which is more efficient for the calculation  $£5.95 + £2.05$ ? (4 marks)**

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**4. What might happen if Max miscalculated his total by rounding up instead of down? Explain the impact this would have on his available budget. (3 marks)**

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**5. Max wants to buy an item costing £8.40. If he only has 50p coins, explain the method you would use to determine how many coins he needs. (3 marks)**

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**6. Create your own mental math challenge for a classmate involving three items priced between £1.00 and £5.00. Write the problem and the mental strategy they should use to solve it. (4 marks)**

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*Extension challenge: Design a 'Marketplace Menu' with at least five items. Write a set of 'Greater Depth' word problems that require the user to use at least two different mental math steps (e.g., addition followed by subtraction) to find the final answer.*