

# Max's Magical Maths: The Mystery of the Missing Numbers

*Learning objective: To understand how to solve simple one-step equations and use symbols or letters to represent unknown numbers.*

Read the puzzle below and help Max the monkey solve the missing values. Remember, in algebra, a shape or letter stands for a number we don't know yet!

Max the monkey is organising his fruit shop. He uses symbols to represent the prices of his favourite snacks. He knows that every time he adds the same number to his total, it must balance out on both sides of his scale. If a bunch of bananas costs £2 and adding an apple makes the total £5, we can write this as:  $£2 + A = £5$ . Max needs your help to find out what 'A' is worth!

*Word bank: Equation · Variable · Unknown · Balance · Value · Operation*

**1. Max has a bag of nuts worth £3. He adds some berries and the total cost is £7. Write an equation using the letter 'B' for berries and solve it. (2 marks)**

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**2. If a triangle represents 4, what is the value of: Triangle + Triangle + 2? (2 marks)**

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**3. Max's scale is balanced. On the left side, he has 10kg. On the right side, he has a 6kg weight and a mystery box marked 'X'. Write the equation and find the value of X. (2 marks)**

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**4. Explain in your own words why we use letters like 'X' or 'A' in maths. (2 marks)**

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**5. If  $5 + Y = 12$ , what is the value of Y? (1 mark)**

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**Draw:** Draw Max the monkey standing next to a set of balance scales. On one side of the scale, draw a box labelled 'X' and a weight labelled '3kg'. On the other side, draw a weight labelled '10kg'.



*Extension challenge: Create your own 'Mystery Number' puzzle for a partner. Choose a starting number, add a secret amount, and give them the final total. Ask them to find the value of your secret amount!*