

# Two-Step Equations

Name:

Date:

**INQUIRY**

You spent 47 yuan on lunch: a bowl of duck blood noodle soup for 20 yuan and 3 baozi. How much was each baozi?

Discuss with your partner. Write your initial ideas below:

## Key Vocabulary

Term	Definition
<b>Two-step equation</b>	An equation that needs two inverse operations to solve.
<b>Key rule</b>	Undo + or – FIRST, then undo x or / (reverse BIDMAS).

## Part A — Solving Two-Step Equations

1. Solve:  $3x + 5 = 20$  [2 marks]

Show your working:

2. Solve:  $4y - 7 = 13$  [2 marks]

Show your working:

**3. Solve:  $2n + 10 = 30$  [2 marks]**

Show your working:

**4. Solve:  $5a - 3 = 22$  [2 marks]**

Show your working:

**5. Solve:  $(x + 3) / 2 = 8$  [2 marks]**

Show your working:

**6. Solve:  $(m - 5) / 4 = 3$  [2 marks]**

Show your working:

## **Part B — Real-World Two-Step Problems**

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**7. Baozi problem:  $20 + 3b = 47$ . Solve for  $b$  and check your answer. [3 marks]**

Show your working:

- 8.** Korean BBQ charges 15,000 won per person plus a 5,000 won table fee. The total bill was 80,000 won. Write and solve an equation to find the number of people. [3 marks]

Show your working:

- 9.** A Nanjing taxi charges 11 yuan for the first 3 km, then 2.40 yuan per extra km. The total fare was 35 yuan. Write and solve an equation for the total distance. [3 marks]

Show your working:

- 10.** Two friends buy concert tickets in Berlin. Ticket A costs  $x$  euro. Ticket B costs  $(2x - 5)$  euro. Together they spend 55 euro. Find the cost of each ticket. [3 marks]

Show your working:

## Part C — Challenge

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- 11.** I think of a number, multiply it by 4, subtract 6, then divide by 2. The answer is 9. What was my number? Write and solve the equation. [3 marks]

Show your working: