

Problem solver

Make a big problem smaller in four steps.



NAME _____ CLASS _____ DATE _____

LEARNING GOAL

I can solve a word problem with more than one step by breaking it into smaller parts.

SUCCESS CRITERIA

- ☐ I can pick out what I know and what I need.
- ☐ I can draw a bar model and order the steps.
- ☐ I can check my answer and give its units.

WORKED EXAMPLE



Year 5 hold a **bake sale**. They sell 48 cupcakes at 75p each and 30 cookies at 50p each. The ingredients cost £12 altogether. How much **profit** did they make?
Profit is the money left over after paying the costs.

U Understand



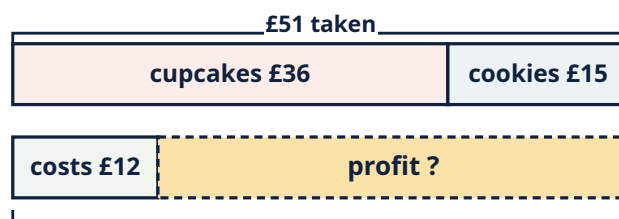
WHAT DO I KNOW?

- 48 cupcakes, 75p each
- 30 cookies, 50p each
- Ingredients cost £12

WHAT DO I NEED?

The **profit**: money taken minus the £12 costs. *Each* means multiply.

P Plan



the same £51

1. ☐ × Cupcake money
2. ☐ × Cookie money
3. ☐ + Total taken
4. ☐ - Subtract costs

S Solve



1. $48 \times 75p = 40 \times 75 + 8 \times 75$
 $= 3000 + 600 = 3600p = \text{£}36.00$
2. $30 \times 50p = 1500p = \text{£}15.00$
3. $\text{£}36 + \text{£}15 = \text{£}51.00$ taken
4. $\text{£}51 - \text{£}12 = \text{£}39.00$ profit

Tip: work in pence, then divide by 100 to change to pounds.

C Check



ESTIMATE

48 is about 50, and $50 \times 75p = \text{£}37.50$. Add £15: £52.50. Take away £12: £40.50. **£39 is close.**

INVERSE

$\text{£}39 + \text{£}12 = \text{£}51$. Take away £15: £36. $3600p \div 75p = 48$. **It works.**

ANSWER SENTENCE

The bake sale made a profit of £39.00.

Remember U, P, S, C. Read the problem twice before you start, and draw before you calculate.

Solve it in four steps



YOUR PROBLEM



30 pupils in Year 6 go on a trip to a farm. The coach costs **£375 altogether**, shared equally between the pupils. Each pupil also needs a **farm ticket costing £6.50**. Each pupil pays with a **£20 note**. How much **change** does each pupil get?

U Understand



WHAT DO I KNOW?

WHAT DO I NEED TO FIND?

P Plan



Draw a bar model. Label the parts you know and put ? on the part you need.

MY STEPS IN ORDER

1. ☐ _____
2. ☐ _____
3. ☐ _____

S Solve



Show every step. Number each one to match your plan.

C Check



ESTIMATE OR USE THE INVERSE

ANSWER SENTENCE WITH UNITS (£ OR P)

CLUE WORDS

altogether +

each ×

shared equally ÷

change –

left over –



GO FURTHER

For sports day, Mr Osei makes **6 jugs** of lemonade. Each jug holds **1.5 litres**. He pours it into cups that hold **250 ml**. 30 children have one cup each. How many cups of lemonade are left over?

Hint: 1 litre = 1000 ml.

Answer: _____ cups

