

Bar-model problem solver

Four moves that crack any word problem.



NAME _____ CLASS _____ DATE _____

LEARNING GOAL

Use bar models to plan and solve one-step and multi-step word problems.

SUCCESS CRITERIA

- ☐ I can find the key numbers and the question.
- ☐ I can draw a bar model with parts to scale.
- ☐ I can write number sentences from my bar.
- ☐ I can answer with units and check it.

1 Watch the four moves

Worked example

PROBLEM

A school buys 4 boxes of 24 pencils and gives 30 away. How many pencils are left?

1 Read

Numbers, question

4 boxes

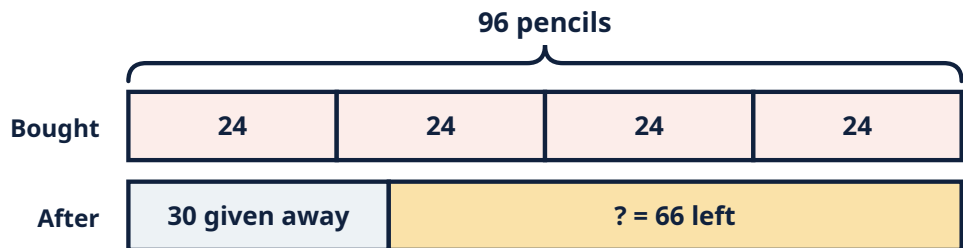
24 in each box

30 given away

Find: pencils left

2 Draw

Equal means equal



4 equal parts, so 4 equal lengths. 30 is more than 24, so its part is longer than one box.

3 Write

A sentence a step

a $4 \times 24 = 96$

b $96 - 30 = 66$

4 Answer

Units, then check

There are **66 pencils** left. ✓ Check: $66 + 30 = 96$

2 Read the bar: find each ?

2 points



Your turn: climb the levels



FOUR MOVES

1 Read: underline numbers

2 Draw: equal means equal

3 Write

4 Answer with units

3 Part and whole

LEVEL 1

3 points

MOVE 1: READ

A library trolley holds 145 books. 68 are fiction and the rest are non-fiction. How many books are non-fiction?

MOVE 2: DRAW THE BAR



MOVE 3: NUMBER SENTENCE

MOVE 4: ANSWER

BOOKS

4 Compare two bars

LEVEL 2

3 points

MOVE 1: READ

A blue ribbon is 18 cm long. A red ribbon is 4 times as long as the blue ribbon. How much longer is the red ribbon than the blue ribbon?

MOVE 2: DRAW THE BAR

Blue
Red

MOVE 3: NUMBER SENTENCES

MOVE 4: ANSWER

CM

5 Two steps

LEVEL 3

4 points

MOVE 1: READ

Ben and Ava share 84 marbles. Ava has 18 more marbles than Ben. How many marbles does Ben have?

MOVE 2: DRAW THE BAR

Your bar model, your way.

MOVE 3: NUMBER SENTENCES

MOVE 4: ANSWER

MARBLER



BONUS ROUND Ava gives Ben some marbles so they both have the **same** number. How many does she give him?

ANSWER

MARBLER