

Grade 2 · One- and Two-Step Word Problems · Lesson

Common Core 2.OA.A.1 · mathovore.fr

A word problem is a short story that asks a math question. To solve it, decide whether numbers are joined, taken away, put together, taken apart, or compared. Draw a bar model, write an equation with a ? for the unknown number, and solve it. A two-step problem needs two equations, one after the other.

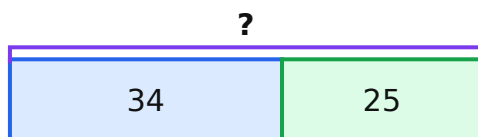
Grade 2 Common Core: 2.OA.A.1

Key facts:

- A bar model shows the numbers in a story as bars, with a ? for the unknown.
- Joining and putting together usually mean add; taking away, taking apart and comparing usually mean subtract.
- The unknown can be the total, the change, or the start.
- A two-step problem needs two equations, and the first answer is used in the second step.
- Check by using the opposite operation and by rereading the story.

What is a word problem?

A word problem is a short story that hides a math question. The story gives some numbers. You find a new number. First, read the story. Then ask: is something joined, taken away, put together, or compared?



Maya has 34 stickers. A friend gives her 25 more. The bracket marks the unknown total.

How does a bar model help?

Bar model

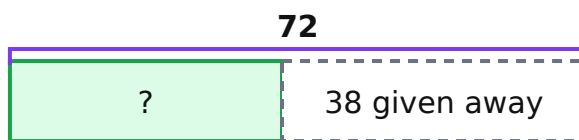
A **bar model** is a picture made of bars. Each bar stands for a number. A bracket shows the

whole. A ? marks the number you need to find.

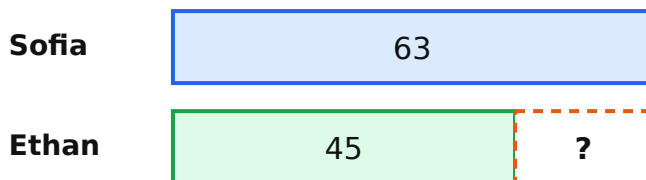
Draw the bar model first. Then write an **equation**, which is a number sentence with an equal sign, such as $34+25=59$. The ? can stand for the total, the change, or the start.

What kinds of one-step problems are there?

Story type	Clue words	Example equation
Adding to or putting together	gets more, joins, in all	$34+25=?$
Taking from or taking apart	gives away, flies away, left	$72-38=?$
Comparing	how many more, how many fewer	$63-45=?$



Jamal has 72 marbles and gives 38 away. The dashed part is the marbles he gave away.



Sofia has 63 books and Ethan has 45. The dashed part shows how many more Sofia has.

Sometimes the story hides the start or the change. Then the equation looks like $?+25=59$ or $72-?=34$. Think about which part is missing, and use the opposite operation to find it.

How do you solve a two-step problem?

A two-step problem needs two equations. The answer to the first step is used in the second step.

1. Read the story and circle the numbers.
2. Find the first question hidden in the story. Draw a bar model and solve it.
3. Use that answer to solve the second question.
4. Write the answer in a sentence and check that it makes sense.

Example. Liam has 28 cards. He buys 15 more cards. Then he gives 20 cards to his sister. How many cards does he have now?

Step 1: $28 + 15 = 43$. Step 2: $43 - 20 = 23$. Liam has **23** cards.



Two steps in a row: $28 + 15 = 43$, then $43 - 20 = 23$.

How can you check an answer?

Use the opposite operation. For $43 - 20 = 23$, check that $23 + 20 = 43$. Also ask: does the answer fit the story? If Liam gives cards away, he should end with fewer cards than he had after buying.

One- and Two-Step Word Problems: frequently asked questions

What is a bar model in 2nd grade math?

A bar model is a drawing that shows the numbers in a story as bars. A bracket marks the whole and a question mark marks the unknown. It helps you see whether to add or subtract before you write the equation.

How do I know whether to add or subtract?

Ask what happens in the story. Joining or putting together usually means add. Taking away, taking apart, or asking how many more usually means subtract. Draw the bar model to check your choice.

What is a two-step word problem?

A two-step word problem needs two equations. You solve the first one, then use its answer in the second. For example, $28 + 15 = 43$ and then $43 - 20 = 23$.

What if the start number is the unknown?

Write an equation with a ? in the first spot, such as $? - 18 = 47$. Then use the opposite operation: $47 + 18 = 65$. Always check by putting the answer back in the story.

How can I check my answer to a word problem?

Use the opposite operation to check the equation, then reread the story. The answer must make sense, so there are more cards after buying and fewer cards after giving away.