

Grade 4 - Multistep Word Problems - Lesson

Common Core 4.OA.A.3 · maths-pdf.fr/en/

A multistep word problem takes two or more operations to solve. Draw a bar model and use a letter for the unknown. Solve one step at a time, such as $6 \times 24 = 144$ and then $144 - 37 = 107$. Decide what to do with any remainder, and use estimation to check that your answer is reasonable.

Grade 4 · Common Core State Standards: **4.OA.A.3**

Key facts

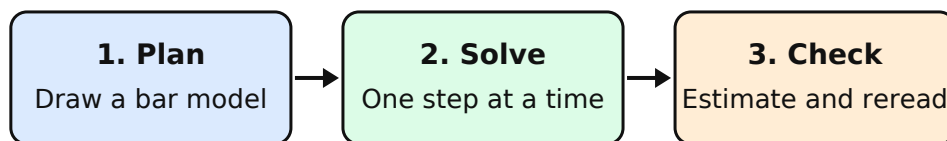
- A multistep problem uses two or more of the four operations.
- Use a letter for the unknown and write an equation, such as $b = 6 \times 24 - 37$.
- Solve one step at a time and write units with each answer.
- Interpret a remainder by rereading the question: drop it, round up, or use it as the answer.
- Check with estimation by rounding the numbers and doing the same steps.

What is a multistep word problem?

A multistep problem needs more than one operation. You might multiply first, then subtract. Each step answers a smaller question that leads to the final answer.

Equation with a letter

Use a letter to stand for the unknown. For example, if b is the number of bottles used, write $b = 6 \times 24 - 37$. Then solve the steps in order.



A reliable plan for every multistep problem.

How do you solve one step at a time?

Read the problem twice. Draw a picture or bar model, then work out each step.

Bought	24	24	24	24	24	24
Left	37 left					

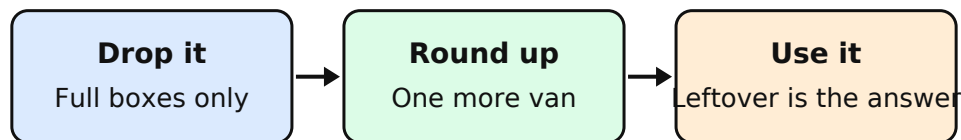
Six boxes of 24 bottles is 144 bottles. Subtract the 37 that are left to find how many were used.

1. Find the total bottles: $6 \times 24 = 144$.
2. Subtract the bottles that are left: $144 - 37 = 107$.
3. Write the answer with units: 107 bottles were used.

Jamal's soccer club bought 6 boxes with 24 water bottles in each box. After the tournament, 37 bottles were left. The one equation $b = 6 \times 24 - 37$ has both steps.

What do you do with a remainder?

Read the question to decide. A remainder does not always become part of the answer.



Three ways to handle a remainder, depending on the question.

- **Drop it:** $50 \div 8 = 6 \text{ R } 2$. Only 6 full boxes can be filled.
- **Round up:** $94 \div 7 = 13 \text{ R } 3$. Three people still need a ride, so 14 vans are needed.
- **Use it:** The question asks how many are left over. The answer is the remainder, 3.

How can estimation check your answer?

Round the numbers and do the same steps. If your exact answer is close to the estimate, it is reasonable. If it is far away, look for a mistake.

Exact	$4 \times 198 = 792$	52
ounded	$4 \times 200 = 800$	50

The exact total is 844. The estimate $4 \times 200 + 50 = 850$ is close, so the exact answer is reasonable.

Order matters in a multistep problem. Multiply or divide before you add or subtract, unless the story tells you otherwise.

Questions about multistep word problems

What is a multistep word problem?

It is a story that needs more than one calculation to answer. For example, you may multiply to find a total and then subtract to see how many are left.

How do you write an equation with a letter?

Choose a letter, such as b , for the unknown. Then write the steps with numbers and operations: $b = 6 \times 24 - 37$. Solve it by doing multiplication before subtraction.

What should you do with a remainder?

Reread the question. If you need full groups only, drop the remainder. If everyone needs a seat or a box, round up. If the question asks for what is left, the remainder is the answer.

How does estimation help with multistep problems?

It shows whether your answer makes sense. Round each number, do the same steps, and compare. If $4 \times 198 + 52$ is about 850, an exact answer of 844 is reasonable.

Why do I solve one step at a time?

Small steps are easier to check, and each answer answers a smaller question. Writing each step also helps a teacher see your thinking.