Practice problems

Start with one problem. If you finish it, try the others.

How to use this sheet

1. Paste the tutor message into Gemini. Then type **one problem from this page** to start. The tutor needs a specific problem. A topic like "teach me fractions" will not work.
2. Say what you tried. You can play the mistake under the problem, as if you were a student who believes it.
3. Do not turn the sheet over yet. Work with the tutor until you have an answer.
4. Then turn the sheet over to check the answer and ask yourself the three questions. If you finish, keep going with the other problems.

Three questions to ask yourself afterwards

1. Did I try before asking for a hint?
2. Did the AI ever give the whole answer?
3. Could I say it again with the screen turned away?

PROBLEM 1 · ABOUT GRADE 7

Add 2/5 + 1/4.

A mistake many students make: add the tops and add the bottoms, and get 3/9.

PROBLEM 2 · ABOUT GRADE 8

A shirt costs $60. The price goes up by 15%. What is the new price?

A mistake many students make: add 15 to 60, and get $75.

PROBLEM 3 · ABOUT GRADE 9

Solve for x: x/4 + 3 = 9.

A mistake many students make: take away 3, then divide by 4, and get 3/2.

PROBLEM 4 · ABOUT GRADE 10

Solve for x: 3x + 2 = 5x - 8.

A mistake many students make: move the 5x and the 2 across without changing their signs, so 3x + 5x = -8 + 2, and get x = -3/4.

Practice problems only. Do not type names, your school, or anything about your life. From the TPL Innovator in Residence workshop AI for School, October 2026.

Answers

Check your answer here after you have worked with the tutor, not before.

> **The tutor will not say "right" on purpose.** It is told not to confirm an answer you say yourself. That is why this page is here. **The tutor can be wrong too.** If its steps do not match this page, say so and check it.

PROBLEM 1

13/20

The bottom numbers must match first. 5 and 4 both go into 20. 2/5 is 8/20, and 1/4 is 5/20. Then 8/20 + 5/20 = 13/20.

Where the mistake goes wrong: the pieces are different sizes, so you cannot add the tops until the bottoms match.

PROBLEM 2

$69

10% of 60 is 6, and 5% is 3, so 15% is 9. The price goes up by $9, and 60 + 9 = 69.

Where the mistake goes wrong: 15 is a percent, not a number of dollars. 15% of 60 is 9, not 15.

PROBLEM 3

x = 24

Take 3 away from both sides: x/4 = 6. The x is being divided by 4, so undo it by multiplying both sides by 4: x = 24. Check: 24/4 = 6, and 6 + 3 = 9.

Where the mistake goes wrong: dividing by 4 undoes multiplying. Here x is already divided by 4, so you multiply.

PROBLEM 4

x = 5

Get the x terms on one side. Take away 3x from both sides: 2 = 2x - 8. Add 8 to both sides: 10 = 2x. Divide both sides by 2: x = 5. Check: 3 × 5 + 2 = 17, and 5 × 5 - 8 = 17.

Where the mistake goes wrong: when a term moves to the other side, its sign flips. 5x becomes minus 5x, and 2 becomes minus 2.

Answers were worked out by a program that does exact arithmetic, not by an AI. From the TPL Innovator in Residence workshop AI for School, October 2026.