

Step by Step Algebra: Linear Word Problems

A browser-based activity that helps students slow down, interpret the story, identify the math structure, and explain answers in context.

Student App Link

<https://astounding-bienenstich-ebcc53.netlify.app/s/Svc9sf0BZ9>

Teacher note: Put this PDF in your learning management system or project it for students. Students open the link or scan the QR code. No account setup is needed.



Scan to open the app

All students can learn math when the process is broken down into short, clear steps.

What students practice

- Read a linear word problem and identify what the question asks
- Find the starting value in a real-world situation
- Find the rate of change from words like each, per, or every
- Write an equation in the form $y = mx + b$
- Substitute an x -value and solve for y
- Compare two linear situations using the same x -value
- Explain what the answer means in context

Teacher note

This activity is designed for students who need help with the thinking process behind linear word problems, not just the final calculation.

The app keeps the steps visible as students build the solution so they can see how the story becomes an equation and how the equation answers the question.

Big Idea

Linear word problems usually include a starting value and a rate of change.

Students use $y = mx + b$: the starting value is b , the rate of change is m , and the equation can be used to answer the question.

How the activity works

- Students choose a level and work one problem at a time
- The first 3 problems in each level are Guided Practice with hints
- Later problems are Independent Practice
- Students can review the completed steps after solving

Levels Included

Level	Focus
1	Understand what the word problem is asking
2	Find the starting value
3	Find the rate of change
4	Write the equation
5	Use the equation
6	Compare two situations
7	Interpret the answer
8	Mixed review

Teacher Quick Guide

Use this page when introducing the activity or deciding how it fits your lesson.

Suggested classroom uses

- Warm-up or review before a linear equations lesson
- Guided practice after teaching $y = mx + b$ from word problems
- Intervention or reteaching for students who struggle with word problems
- Station rotation, independent practice, or early-finisher work
- Homeschool or tutoring practice when students need a clear step-by-step path

Student-friendly reminders

- First ask: What is the problem asking me to find?
- The starting value is what is already there or charged once
- The rate of change is the amount that repeats each time
- Put the rate next to x and the starting value at the end
- After calculating, explain what the answer means in the story

Simple setup

- Share this PDF with students or post it in Google Classroom, Canvas, Schoology, or another LMS
- Students open the app link or scan the QR code
- Students choose a level or begin with Level 1
- Teachers may ask students to show their screen, write down final context sentences, or complete selected levels

About progress in the app

The sidebar uses Progress by Level so students and teachers can see how many problems have been completed in each level. Progress shows completed problems out of the total in the level. Correct / Tried shows accuracy on the problems attempted.

Why this activity is different

Many word-problem activities jump straight to choosing an equation or calculating a final answer. This activity slows down the interpretation process. Students practice the parts of mathematical modeling one at a time: reading the question, identifying the starting value, identifying the rate, writing the equation, using the equation, comparing situations, and explaining the answer.

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Students do not need to sign in. The app runs directly in the browser.



Scan to open

Teacher note for TPT buyers

This product includes access to a student-facing browser activity. The activity is designed as digital practice and does not require printed worksheets, student accounts, or rostering. For best results, have students work with scratch paper nearby so they can record equations and context sentences as they practice.

Device and privacy note: Works in a modern browser on Chromebooks, laptops, desktops, and many tablets. No student names, emails, passwords, accounts, or scores are collected by the app.