



Solving Linear Equations in Word Problems

Today's Standard

7.EE.B4a - Solve word problems leading to equations of the form $px + q = r$ and $p(x + q) = r$, where p , q , and r are specific rational numbers. Solve equations of these forms fluently. Compare an algebraic solution to an arithmetic solution, identifying the sequence of the operations used in each approach. For example, the perimeter of a rectangle is 54 cm. Its length is 6 cm. What is its width?

Cues	Notes
What is a linear equation?	A linear equation is an equation between two variables that gives a straight line when plotted on a graph.
How do you solve $px + q = r$?	To solve $px + q = r$, isolate x by performing inverse operations.
What is the distributive property?	The distributive property states that $a(b + c) = ab + ac$.
How do you compare algebraic and arithmetic solutions?	Compare the steps in solving equations algebraically and arithmetically to understand the sequence of operations.
Example: Perimeter problem	Example: For a rectangle with a perimeter of 54 cm and length of 6 cm, set up the equation $2(6 + w) = 54$ to find the width.

Summary

Understanding and solving linear equations from word problems involves isolating the variable and applying properties like the distributive property. Comparing algebraic and arithmetic solutions helps in understanding the problem-solving process.