Proactive Instruction

Cornell Notes

Solving Linear and Quadratic Systems

Today's Standard

HSA.REI.C7 - Solve a simple system consisting of a linear equation and a quadratic equation in two variables algebraically and graphically. For example, find the points of intersection between the line $y = -3x$ and the circle $x^2 + y^2 = 3$.

Cues	Notes
What is a system of equations?	A system of equations is a set of equations with the same variables.
How do you solve a system involving a linear and a quadratic equation?	To solve a system involving a linear and a quadratic equation, you can use algebraic methods (substitution, elimination) or graphically find the intersection points.
What are the possible solutions to a system of equations?	Possible solutions include no solution, one solution, or multiple solutions.
What are common misconceptions when solving these systems?	Common misconceptions include thinking there is always one solution and confusing methods for solving linear and quadratic systems.
What real-world applications involve these systems?	Real-world applications include finding intersections in trajectories, boundaries, and economic trends.

Summary

Solving systems of equations involving linear and quadratic equations requires understanding both types of equations and their graphical representations. Solutions can vary, and there are common misconceptions to address. These skills are applicable in many real-world contexts.