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.

Real-World Applications for this Standard

Finding the intersection of a parabolic trajectory and a straight path; Determining points where a circular boundary intersects a linear fence; Modeling the intersection of a road and a curved bridge; Analyzing the crossing points of a linear trend and a quadratic growth in economics

Today I Learned

Today, I learned how to find where a straight line and a curve meet on a graph. This helps us understand how different shapes can intersect.

Common Stumbling Blocks

Sometimes, kids think there is always one answer when two lines or curves meet, but that's not true. Also, they might mix up the steps for solving straight lines and curves. We can help by showing them how to graph these shapes and use different methods for each.

Quiz Me

- What shapes are we looking at in this lesson?
- Can a line and a curve meet at more than one point?
- What should you do first when solving these problems?
- What happens if the line and the curve don't meet?
- Can you show me how to draw a line and a curve on a graph?

Help Me

We are learning how lines and curves can meet in different places. This is like finding where a road and a bridge cross each other. It helps us solve problems in real life, like where to put a new road or how to design a playground.