



Intersection of Graphs and Solutions

Today's Standard

HSA.REI.D.11 - Explain why the x-coordinates of the points where the graphs of the equations $y = f(x)$ and $y = g(x)$ intersect are the solutions of the equation $f(x) = g(x)$; find the solutions approximately, e.g., using technology to graph the functions, make tables of values, or find successive approximations. Include cases where $f(x)$ and/or $g(x)$ are linear, polynomial, rational, absolute value, exponential, and logarithmic functions.*

Real-World Applications for this Standard

Determining break-even points in business models; Finding equilibrium in supply and demand curves; Solving for points of intersection in engineering designs; Analyzing intersections in traffic flow models; Comparing growth rates in population studies

Today I Learned

Today, we learned how to find where two graphs meet and why the x-values at those points are important. This helps us solve equations where two things are equal.

Common Stumbling Blocks

Sometimes, kids might think that the y-values where the graphs meet are the answers, but it's actually the x-values. Also, they might think only straight lines can meet, but many types of graphs can meet too.

Quiz Me

- What do we look for on a graph to solve an equation?
- Can two graphs meet at more than one point?
- Do we use the x-values or y-values to find the solution?
- Can curvy lines meet each other on a graph?
- Can we use a computer to help us find where graphs meet?

Help Me

When two lines or curves meet on a graph, the x-values at those points show us the solutions to an equation. This is like finding where two roads cross on a map to know where you are.

