

Represent and solve equations and inequalities (Standards A.REI.11).	
Standard A.REI.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, for example, 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. ★	
Concepts and Skills to Master	
<ul style="list-style-type: none"> • Approximate solutions to systems of two equations using graphing technology. • Approximate solutions to systems of two equations using tables of values. • 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 $f(x) = g(x)$. • Be able to express that when $f(x) = g(x)$, the two equations have the same solution(s). • Explain, in their own words, how the x-coordinate of a solution to the system $y = f(x)$ and $y = g(x)$ solves $f(x) = g(x)$. • Find approximate solutions for the system $y = f(x)$ and $y = g(x)$ using graphs or tables. • Use successive approximations as a method to solve the system $y = f(x)$ and $y = g(x)$. 	
Related Standards: Current Course	Related Standards: Future Courses
III.A.CED.2 , III.A.CED.3 , III.A.REI.2 , III.F.LE.5 , III.F.TF.7	P.A.REI.8, P.A.REI.9

Support for Teachers

Critical Background Knowledge (Access Background Knowledge)
<ul style="list-style-type: none"> • Understanding that the graph of an equation in two variables is the set of all its solutions plotted on a coordinate plane (I.A.REI.10) • Explain why the x-coordinate is the solution of the system of equations where $f(x) = g(x)$ (I.A.REI.11)
Academic Vocabulary
system of equations, intersection, approximation, root, zero, solution
Resources
Curriculum Resources : https://www.uen.org/core/core.do?courseNum=5630#71607