

Topic 10: Systems of Equations (A.REI 5)

Purpose: The purpose of the first three examples is to get students to identify the solution to a system of equations from a graph, table, or equations. The final three examples ask students to solve systems in context. Please use your professional judgment when following this guide, if students are struggling with the content and need more support, then provide that additional support.

Core Standards Focus:

A.REI 5 Prove that, given a system of two equations in two variables, replacing one equation by the sum of that equation and a multiple of the other produces a system with the same solutions.

Launch (Individual time): Starting with example 1, ask students to take 1 minute individually to identify the solution to the system. Some students may not be able to start on this task. Identify those students and consider pairing them with another student who may be able to provide additional support. If most of the class is unable to start on the task then facilitate the first example as a whole class think-aloud. Make sure all students understand the first example before moving on to the explore phase.

Explore (pairs): Using example 2, give students a few minutes to work together to find the solution to the system. Consider suggesting that students try to find the solution using the tables or the equations if they have already found it with the graph. Repeat this process with example 3 to provide students additional practice and to solidify their thoughts.

Discuss (Whole Class): Call on some students to share their solutions and talk about their reasoning. Be selective with the student work you use and sequence the work in a way that will connect a variety of ideas. Use the FluidMath program to check their work. The second and third examples for this topic can be completed in an accelerated manner as long as the first example was completed thoroughly. After the first three examples have been completed, return to the launch, explore, and discuss cycle with examples 4 through 6.