Solving a system graphically	Season	01
	Episode	AP12
	Time frame	55 mins

Prerequisites : Solve a system by elimination. Line equations.

Objectives :
- Practise the graphical method for solving a system.

Materials :
- *Answer sheets.*
- *Graphed tracing paper.*
- *Line equations.*
- *Slideshow.*

1 – Find the other half of your system

10 mins

1. Each student is given a line equation and has to draw the line on a sheet of graphed tracing paper. It's important that everyone uses exactly the same units, and better if they place the axes in the same position.
2. A list of coordinate couples (9 or 10) is projected on the board.
3. Each student has to find another one such that the solution of the system made by their two equations is one of the coordinates.
4. Once a pair is formed, the two students have to solve the system algebraically to check the solution.

2 – System solving contest

45 mins

Students work by pairs. Each pair has to find graphically an approximate solution of the system made by their two equations, then check the answer algebraically. Then, they move on to make other pairs with other students.
Students get a mark at the end of the session, depending on the number of systems they correctly solved.

Solving a system graphically	Season Episode Document	01 AP12 Answer sheet

System 1

System

$$\begin{cases} \_\_\_\_\_ \\ \_\_\_\_\_ \end{cases}$$

Approximate solution

Exact solution

System 2

System

$$\begin{cases} \_\_\_\_\_ \\ \_\_\_\_\_ \end{cases}$$

Approximate solution

Exact solution

System 3

System

$$\begin{cases} \_\_\_\_\_ \\ \_\_\_\_\_ \end{cases}$$

Approximate solution

Exact solution

System 4

System

$$\begin{cases} \_\_\_\_\_ \\ \_\_\_\_\_ \end{cases}$$

Approximate solution

Exact solution

System 5

System

$$\begin{cases} \_\_\_\_\_ \\ \_\_\_\_\_ \end{cases}$$

Approximate solution

Exact solution

System 6

System | Approximate solution | Exact solution

$$\begin{cases} \_\_\_\_\_ \\ \_\_\_\_\_ \end{cases}$$

System 7

System | Approximate solution | Exact solution

$$\begin{cases} \_\_\_\_\_ \\ \_\_\_\_\_ \end{cases}$$

System 8

System | Approximate solution | Exact solution

$$\begin{cases} \_\_\_\_\_ \\ \_\_\_\_\_ \end{cases}$$

System 9

System | Approximate solution | Exact solution

$$\begin{cases} \_\_\_\_\_ \\ \_\_\_\_\_ \end{cases}$$

System 10

System | Approximate solution | Exact solution

$$\begin{cases} \_\_\_\_\_ \\ \_\_\_\_\_ \end{cases}$$

Document 1 Line equations

$$x - 2y = -9$$

$$2x + y = -8$$

$$x + y = 1$$

$$-2x + y = 7$$

$$2x - y = 0$$

$$x + y = 6$$

$$2x + y = 15$$

$$-2x + y = -9$$

$$x + 5y = -4$$

$$x - y = 8$$

$$3x - 2y = 7$$

$$x + 2y = 5$$

$$x + y = -4$$

$$5x - 2y = -6$$

$$3x + 2y = -20$$

$$-2x + 5y = 7$$

$$x - 6y = 30$$

$$3x + y = -5$$

$$7x + y = 10$$

$$-3x + 4y = -22$$