

Graphing Calculator Lab

Systems of Equations

You can use a Sharp EL-9900C graphing calculator to solve a system of equations.

EXAMPLE

Solve the system of equations. State the decimal solution to the nearest hundredth.

$$2.93x + y = 6.08$$

$$8.32x - y = 4.11$$

Step 1 Solve each equation for y . Enter them into the calculator.

$$2.93x + y = 6.08$$

First equation

$$2.93x + y - 2.93x = 6.08 - 2.93x$$

Subtract $2.93x$ from each side.

$$y = 6.08 - 2.93x$$

Simplify.

$$8.32x - y = 4.11$$

Second equation

$$8.32x - y - 8.32x = 4.11 - 8.32x$$

Subtract $8.32x$ from each side.

$$-y = 4.11 - 8.32x$$

Simplify.

$$(-1)(-y) = (-1)(4.11 - 8.32x)$$

Multiply each side by -1 .

$$y = -4.11 + 8.32x$$

Simplify.

Step 2 Enter these equations in the $Y=$ list and graph.

KEYSTROKES: Review Graphing Linear Functions.

Step 3 Use the $CALC$ menu to find the point of intersection.

KEYSTROKES: 2^{nd} [CALC] 2

The solution is approximately $(0.91, 3.43)$.



EXERCISES

Use a graphing calculator to solve each system of equations. Write decimal solutions to the nearest hundredth.

1. $y = 3x - 4$

$$y = -0.5x + 6$$

2. $y = 2x + 5$

$$y = -0.2x - 4$$

3. $x + y = 5.35$

$$3x - y = 3.75$$

4. $0.35x - y = 1.12$

$$2.25x + y = -4.05$$

5. $1.5x + y = 6.7$

$$5.2x - y = 4.1$$

6. $5.4x - y = 1.8$

$$6.2x + y = -3.8$$

7. $5x - 4y = 26$

$$4x + 2y = 53.3$$

8. $2x + 3y = 11$

$$4x + y = -6$$

9. $0.22x + 0.15y = 0.30$

$$-0.33x + y = 6.22$$