

Review of linear systems (optional)

Definition: Finding a solution to 2 linear equations in 2 variables – that is, values for both variables that make both equations true simultaneously - is called solving a **2x2 system of linear equations**.

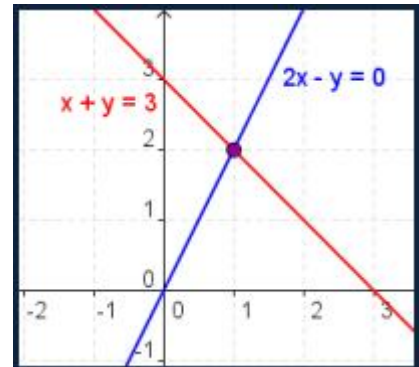
Sample problem: Solve the 2x2 linear system: $\begin{cases} 2x + y = 1 \\ x - y = 2 \end{cases}$ **Answer:** $(x, y) = (1, -1)$.

1. Look at the **sample problem** above.

- Check that the answer is correct – substitute the answer into both equations and check that both are true.

2. Now look at the graph to the right.

- Write down the problem that matches this graph using the same words and symbols as above and including the answer.
- Solve this problem using substitution or addition method. Check that your answer and the intersection point agree.



3. Again, look at the sample problem above.

- Graph this system either by hand or using GeoGebra.
- Determine the coordinates of the intersection point. Label the lines and your point.
- Check that the answer given above and the intersection point of the two lines are the same.