8.EE The Intersection of Two Lines

Task

a. Draw the two lines that intersect only at the point (1, 4). One of the lines should pass through the point (0, −1).

b. Write the equation of each of the lines you created in part (a).

c. If we consider two or more equations together we have a system of equations. A solution to a system of equations in \( x \) and \( y \) is a pair of values \( a \) and \( b \) for \( x \) and \( y \) that make all of the equations true.

Do you think such a solution exists for the system of equations in part (b)? Explain.

d. Can you determine whether a system of equations has a solution by looking at the graph of the equations? Explain.