

Chapter 5 Systems of Linear Equations

Dear Family,

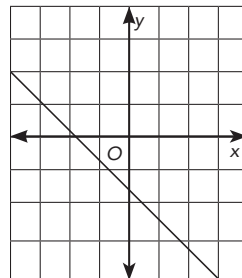
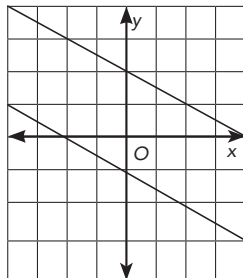
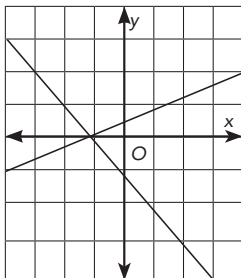
In this chapter, your student will learn about systems of linear equations. Some of the skills your student will practice are:

- solving systems of linear equations using the elimination, substitution, and graphing methods
- understanding and identifying inconsistent and dependent systems of linear equations

Activity

Finding how many solutions a system of linear equations has is an important skill students will use in future math classes. You can help your student explore this skill with this activity.

- Draw graphs of three systems similar to the ones below.



- Copy the chart below, leaving out the entries in italics. Complete the chart with your student by deciding which of the systems you drew is solvable, which is dependent, and which is independent.

Type of system	Solvable	Inconsistent	Dependent
How many points of intersection?	1	0	<i>infinitely many</i>
Are the slopes of the lines equal?	<i>no</i>	yes	yes
Describe the lines	<i>intersecting</i>	<i>parallel</i>	<i>the same</i>

Vocabulary to Practice

A **system of linear equations** is a set of equations that has more than one variable.

If a single pair of variables satisfies all the equations in a system, the pair is called the **unique solution** of the system.

A linear equation written in the form $ax + by = c$ is in **standard form**.

To solve a system using the **graphical method**, graph both equations and find their **point of intersection**.

A system is **inconsistent** if it has no solution. It is **dependent** if it has infinitely many solutions.



Online Resources

For additional Parent Resources my.hrw.com