Dear Family,

In this chapter, your student will solve linear equations in one or two variables. Some of the skills your student will practice are:

- solving linear equations in one variable and solving real-world problems involving linear equations
- identifying linear equations with no solutions or with infinitely many solutions
- representing a relationship between two variables using a table of values or a linear equation
- solving a multi-variable equation for one of its variables

Activity

Linear equations are used in many different math, science, and social science classes. You can help your student understand how to model a relationship with a linear equation with this activity.

- Suppose a student has $22, and can earn $5.25 per hour. You will model the relationship between the hours worked and the student’s total amount of money.

<table>
<thead>
<tr>
<th>Number of hours worked (h)</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total amount of money (m)</td>
<td>$22</td>
<td>$27.25</td>
<td>$33.50</td>
<td></td>
</tr>
</tbody>
</table>

- Create a table of values that models the relationship, using appropriate values and variables:

- Write an equation for the total amount of money in terms of the number of hours worked: $m = 5.25h + 22$.

Choose a value for $m$, substitute it in the equation, and solve the equation for $h$. For example, to find out how many hours of work it will take to save $85.00, substitute 85 for $m$ and solve the equation for $h$.

Vocabulary to Practice

A linear equation with one variable may have one solution, no solution, or infinitely many solutions.

An equation with no solution, such as $8x + 3 = 8x - 1$, is called an **inconsistent** equation.

An equation with infinitely many solutions, such as $3x + 4x = 7x$, is called an **identity**.

Online Resources

For additional Parent Resources my.hrw.com