

Represent and Solve Equations and Inequalities

Dear Family,

Your child is learning how to write and solve algebraic equations involving addition, subtraction, multiplication, and division, and how to write and solve one-step inequalities. He or she will learn to use variables to represent numbers when solving real-world and mathematical problems. Your child will also learn the properties of equality and use them to solve equations.

Your child will also learn how to use variables to represent related quantities in real-world situations. He or she will look for and use patterns to write rules and equations with these variables to describe and extend the patterns. He or she will also represent the patterns using math models, such as tables and graphs on the coordinate plane.

Here is an activity that you can do to help your child understand equations and inequalities.

How Much Is That?

Look in newspapers for ads that give prices of groceries, electronics, toys, sporting goods, and other items that are of interest to your child. Use the ads to have your child write an equation. Suppose an ad shows a bicycle on sale for \$80. Examples of equations are shown below.

If you save \$5 each week, what equation shows how long it would take to save enough money to buy the bicycle? ($5x = 80$, where x represents the number of weeks.)

If you already have \$25, what equation shows how much more you will need to buy the bicycle? ($y + 25 = 80$, where y represents the number of dollars still needed to buy the bicycle.)

Help your child solve each of the equations. ($x = 16$ weeks; $y = \$55$)

If you want to track your savings, what equation shows the amount saved after each week? ($a = 5x$, where a represents the amount saved and x represents the number of weeks.)

Then state that you need at least \$80 to buy the bicycle. Ask your child to write an inequality to represent this situation. (Let m represent the amount of money a person has if they can buy the bicycle; $m \geq 80$.)

Observe Your Child

Focus on Mathematical Practices

Use appropriate tools strategically.

Help your child become proficient with this Mathematical Practice. A number line is an appropriate tool to use to describe the possible solutions of an inequality. Ask your child to represent the inequality from the activity above on a number line. Ask him or her to explain why the solution arrow points in one direction and why he or she used an open or closed circle on the number-line graph.