Name_____

Chapter 7 Algebraic Expressions and Properties

Dear Family,

Many families enjoy exploring their own towns and cities instead of going far away on vacation. Some of those activities may include visiting a movie theater, a local museum, or community theater. Making sure you have enough money to take on the outing is important.

Before you head out to watch your favorite movie on the Big Screen, you can use an expression to estimate the cost. For example, if one ticket costs you $7, you can use the expression, $7x$, where x is the number of tickets you will need, to determine the amount of money you will need to take to the theater.

You and your student can discuss how to calculate the amount of money that will be needed to enjoy the following local family activity. For example, you might ask your student:

- "A family is going to visit the local art museum. The cost for children is $5.50. The cost for adults is $8. What is the expression used to determine how much money it costs for a child to visit the museum? What is the expression used to determine how much money it costs for an adult to visit the museum?" Your student may answer, "The expressions will be $5.5x$, where x is the number of children attending, and $8y$, where y is the number of adults attending."
- "A family has 3 children and 2 adults visiting the museum. How much money will the family spend on each type of ticket?" Your student may answer "The cost for the children is 5.5×3, which is $16.50. The cost for the adults is 8×2, which is $16."

You and your student can then talk about how to find the total cost of visiting the art museum. This process can be used to find the cost of visiting a number of other family activities. Have your student practice finding the cost of visiting other local attractions. Which attraction costs the least? Which attraction costs the most?

Enjoy exploring your city as a family!

Algebraic Expressions and Properties (continued)

Lesson	Learning Target	Success Criteria
7.1 Algebraic Expressions	Evaluate algebraic expressions given values of their variables.	• I can identify parts of an algebraic expression. • I can evaluate algebraic expressions with one or more variables. • I can evaluate algebraic expressions with one or more operations.
7.2 Writing Expressions	Write algebraic expressions and solve problems involving algebraic expressions.	• I can write numerical expressions. • I can write algebraic expressions. • I can write and evaluate algebraic expressions that represent real-life problems.
7.3 Properties of Addition and Multiplication	Identify equivalent expressions and apply properties to generate equivalent expressions.	• I can explain the meaning of equivalent expressions. • I can use properties of addition to generate equivalent expressions. • I can use properties of multiplication to generate equivalent expressions.
7.4 The Distributive Property	Apply the Distributive Property to generate equivalent expressions.	• I can explain how to apply the Distributive Property. • I can use the Distributive Property to simplify algebraic expressions. • I can use the Distributive Property to combine like terms.
7.5 Factoring Expressions	Factor numerical and algebraic expressions.	• I can use the Distributive Property to factor numerical expressions. • I can identify the greatest common factor of terms including variables. • I can use the Distributive Property to factor algebraic expressions. • I can interpret factored expressions in real-life problems.