

Verbal Quantitative Expressions and Equations

STRAND: Patterns, Functions and Algebra

STRAND CONCEPT: Algebraic Expressions

SOL: 5.19ac

Remediation Plan Summary

Students practice matching expressions with contextual situations.

Common Errors and Misconceptions

Students become confused as to whether a verbal description describes an expression or equation. Students may confuse the multiplication symbol “x” with the variable “x.”

Materials

- “Recording Sheet” handouts
- Small pieces of paper with the word *some* written on them
- Matching cards

Introductory Activity

Play a class game of “Guess My Rule”, using the rule “Multiply the input number by 3.” (For example, if the students’ input number is 5, respond with an output number of 15.) Play again, using another rule, e.g., “Double the input number and subtract 1.” Use the following table to organize student responses.

INPUT	OUTPUT

Plan for Instruction

- Present the first number story on the recording sheet to the students. Have the students write an equation to match the story. ($15 + 8 = 23$) Ask the students how they knew to use addition. (The action in the story implies addition.) Using a small piece of paper with the word “some” written on it, cover the number 15 in the number story. Ask students what they would do if they did not know this number. How could they write an equation for the story? (Use a variable to represent the unknown number.)
- Have students write equations using variables. ($p + 8 = 23$) Look at the second number story on the recording sheet. Ask students what the unknown number is in this story. (The number of cookies that were eaten.) Ask them to name the mathematical operation implied by the action in this story. (Most likely the students will say

AR Remediation Plan – Algebraic Expressions

subtraction because some of the cookies are eaten or “taken away.”) Ask students to write an equation for this story. (Students should recognize that this equation cannot be completed because there is no way to determine the final result of the action. Explain to the students that they will need to write an expression to represent this story: $12 - n$

- Give the students sets of the matching cards and have them read the cards to find an expression that matches each story problem.

Pulling It All Together (Reflection)

Have students respond to the following questions in writing.

- Write a story that matches the following expression: $s - 15$
- Write an expression that matches the following story:

Taylor has some vases of flowers. Each vase has 5 flowers.

Note: The following pages are intended for classroom use for students as a visual aid to learning.

Virginia Department of Education 2018

Name: _____

Recording Sheet

1. James had 15 pennies. He found 8 more. Now James has 23 pennies.

2. Bill bought 12 cookies at the bakery. He ate some of the cookies.

3. Jose had 20 pieces of candy to share equally among his friends.

4. Mrs. Jones had 5 fish tanks in her classroom. Each fish tank had some fish.

5. Keisha has a lot of jewelry. She has 3 jewelry boxes. In each box she has 7 rings and some necklaces.

Matching Cards (copy and cut apart)

<p>Tim is 4 years older than Bob.</p>	$b + 4$
<p>Mrs. Wilson planted some flowers in her garden. Five of the flowers died.</p>	$n - 5$
<p>Sue has 4 fewer books than Brenda.</p>	$b - 4$
<p>Tony is collecting baseball cards. So far he has collected 9 cards. His friend gave him some more cards.</p>	$9 + r$

<p>There are some tables in the cafeteria. Each table can seat 5 students.</p>	$n \times 5$
<p>Mom gave Ted some cookies. He asked for 5 more.</p>	$s + 5$
<p>Miguel had some boxes of cereal on his shelf. He donated 9 boxes to the homeless.</p>	$r - 9$
<p>Mr. Jones has some students in his class. He wants to make 5 teams for field day.</p>	$\frac{n}{5}$