

Name: _____

Date: _____

Math Geek Mama's Terms of Use

Thank you for your recent download from Math Geek Mama! We hope you find it useful, but please remember that these are intended for personal use and are copyright of mathgeekmama.com. We therefore ask that you follow the terms of use guidelines outlined below:

Please DO:

- *Use this resource for your personal use in the classroom or homeschool setting*
- *Download the file to your personal computer*
- *Print as many copies as you need*
- *Give credit back or link back to mathgeekmama.com when referring to these printables or sharing with friends*

Please DO NOT:

- *Link directly the pdf file*
- *Edit the resource in any way*
- *Store them on your website or any other medium in any format*
- *Print this resource and sell/distribute to others*
- *Claim them as your own*

All rights reserved. No part of this resource may be reproduced, stored in a retrieval system, or transmitted in any form by any means—electronic, mechanical, photocopy, recording or otherwise—without prior permission of the publisher, except as provided by U.S. copyright law.

Name: _____

Date: _____

Understanding Algebraic Terminology

Mathematics is an effective problem-solving tool that can be used to _____ real-life situations and make _____ about future events.

In order to be effective, however, one must accurately translate verbal and written information into a **mathematical model**.

Key steps:

1. Define a _____ for an unknown number
2. _____ words or phrases into _____ expressions

Examples:

Twice a number, increased by five:

Six less than three times the width:

Ten less than triple the payment:

Identifying and translating such phrases **when they occur in context** will help enable you to solve real-world problems.

Example:

The cost of a rental car is \$35 plus 15 cents per mile. Express the cost of renting a car in terms of number of miles driven.

Name: _____

Date: _____

Understanding what the question is asking:

When you encounter various algebra problems this year, it is essential that you understand *what the question is looking for*, or you will not even know where to start.

Evaluate: Evaluating an expression means replacing the _____ with the given number and simplifying using _____ of _____. The final result will be a _____.

Example:

Evaluate the expression $x^3 - 2x^2 + 5$ for $x = -3$

Simplify: Simplifying an expression means rewriting in the simplest form. This can be done by _____ parentheses, and _____ like terms. When you simplify, you will more than likely still have _____ in the expression.

Example:

Simplify the expression completely: $7(2x^2 + 1) - (x^2 + 3)$

Solve: Solving an equation means finding the value(s) of x that make the equation _____. You can only **solve** when you have an _____ meaning there is an equal sign in the problem.

We will learn how to solve many different types of equations throughout the course of Algebra.

Name: _____

Date: _____

Understanding Algebraic Terminology

Mathematics is an effective problem-solving tool that can be used to model real-life situations and make predictions about future events.

In order to be effective, however, one must accurately translate verbal and written information into a **mathematical model**.

Key steps:

1. Define a variable for an unknown number
2. Translate words or phrases into mathematical expressions

Examples:

Twice a number, increased by five:

n = a number, $2n + 5$

Six less than three times the width:

w = width, $3w - 6$

Ten less than triple the payment:

p = payment, $3p - 10$

Identifying and translating such phrases **when they occur in context** will help enable you to solve real-world problems.

Example:

The cost of a rental car is \$35 plus 15 cents per mile. Express the cost of renting a car in terms of number of miles driven.

c = total cost, m = miles driven; $c = .15m + 35$

Name: _____

Date: _____

Understanding what the question is asking:

When you encounter various algebra problems this year, it is essential that you understand *what the question is looking for*, or you will not even know where to start.

Evaluate: Evaluating an expression means replacing the variable with the given number and simplifying using order of operations. The final result will be a number.

Example:

Evaluate the expression $x^3 - 2x^2 + 5$ for $x = -3$

$$(-3)^3 - 2(-3)^2 + 5 = -40$$

Simplify: Simplifying an expression means rewriting in the simplest form. This can be done by removing parentheses, and combining like terms. When you simplify, you will more than likely still have variables in the expression.

Example:

Simplify the expression completely: $7(2x^2 + 1) - (x^2 + 3)$

$$14x^2 + 7 - x^2 - 3 =$$

$$13x^2 + 4$$

Solve: Solving an equation means finding the value(s) of x that make the equation true. You can only **solve** when you have an equation (not just expression) meaning there is an equal sign in the problem.

We will learn how to solve many different types of equations throughout the course of Algebra.