12 Family Letter

Chapter Resources

Dear Parent or Guardian:

Knowing how to use polynomials can help you solve problems as diverse as those found in interest rates and finance and in designing buildings. In our math class, we strive to connect math concepts to the real world so students can see how the math is used.

In **Chapter 12, Algebra: Nonlinear Functions and Polynomials**, your child will learn how to identify linear and nonlinear functions, graph quadratic functions to make a model when solving problems, and to mltiply and divide monomials. Your child will also learn how to model, simplify, add, subtract, and multiply polynomials. In the study of this chapter, your child will complete a variety of daily classroom assignments and activities and possibly produce a chapter project.

By signing this letter and returning it with your child, you agree to encourage your child by getting involved. Enclosed is an activity you can do with your child that practices how the math we will be learning in Chapter 12 might be tested. You may also wish to log on to **www.msmath3.com** for self-check quizzes and other study help. If you have any questions or comments, feel free to contact me at school.

Sincerely,

Signature of Parent or Guardian _____ Date _____

12 Family Activity

State Test Practice

Fold the page along the dashed line. Work each problem on another piece of paper. Then unfold the page to check your work.

1. Add the terms in the polynomials shown below.

$$2x^2 + 5x - 7 \text{ and } 5x^2 - 8x + 10$$

What is the sum of the given polynomials?

A $7x^2 + 13x - 17$

B $7x^2 - 3x + 3$

C $7x^2 + 3x - 3$

D $2x^2 - 2x + 3$

2. Combine the terms below so that there is one simplified polynomial.

	$7x$	8	$-3x$
$5x^2$	$-11x$		
$-3x$			$-4x^2$
	22	$2x^2$	
		-9	

Which polynomial shows the above terms combined?

A $3x^2 - 10x + 21$

B $2x^2 - 11x + 21$

C $3x^2 - 10x + 22$

D $3x^2 + 21x + 21$

Fold here
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Solution

1. *Hint: Add the like terms (where the exponent is the same).*

Add the like terms.

$2x^2 + 5x^2 = 7x^2$

$5x + (-8x) - 5x - 8x = -3x$

$-7 + 10 = 3$

Put them all together:

$7x^2 - 3x + 3$.

Solution

2. *Hint: Find each of the like terms and add.*

Find all of the x^2 terms and add.
$5x^2 + -4x^2 + 2x^2 = 3x^2$

Find all of the x terms and add.
$7x - 11x - 3x - 3x = -10x$

Find all of the constants and add.
$8 + 22 - 9 = 21$

Write the polynomial.
$3x^2 - 10x + 21$

The answer is **B**.

The answer is **A**.