Unit 10 **Name** _____
Objective 7 Remediation **Section** _____

Objective 7: Use multiple operations to simplify a polynomial.

To do these problems, use the order of operations. The pneumonic PEMDAS will help you remember what to do.

P – Parentheses are always done first.
E – Exponents are done second.
MD – Multiplication and Division are done third. Do these operations as they are seen in the problem, reading left to right.
AS – Addition and Subtraction are done last. Do these operations as they are seen in the problem, reading from left to right.

Ex $2x(x-4)+4x(2x^2-3)=2x^2-8x+8x^3-12x$ **Eliminate Parentheses.**

$=8x^3+2x^2-20x$ **Add like terms.**

Ex $3-8(3x+4)=3-24x-32$ **Eliminate Parentheses.**

$=-24x-29$ **Add like terms.**

Ex $2(4x-3x^2)-5x(-2x^2+3x-1)=8x-6x^2+10x^3-15x^2+5x$

Eliminate Parentheses.

$=10x^3-21x^2+13x$ **Add like terms.**

Use the order of operations to simplify each expression.

1. $-3(2x+4)+2(-5x-3)$

2. $6-2(5x+10)$

3. $4x(x^2-5x+8)+8x-12$

4. $3x-9x(4x-8)$

5. $2(3x-4)+3(3x^2-6x+1)$

6. $9x-(7x^2-3x+8)$

7. $5(2x^2-6x-10)-4(x^2+8x+3)+3(2x^2-8x+2)$

8. $5x^3-7x(7x+10)-2x^2(9x-11)$

9. $x^2-4x^2(3x+9)+6x$

10. $-3(x^2-4x+7)-7(2x^2+6)$

11. $-(6x^3-4x-3)+3x-4(5x^2-8x+2)$

12. $2x(x+3)-5x(3-2x)+8x(4x-1)$

13. $9-2(3x-7)+8(x-8)$

14. $4x(3x-5x^3-6)+7(2x^2-4x)$

15. $-3+6(7x^3-8x+2)-4x+3x(2-x^2)$