## Adding, Subtracting, and Multiplying Polynomials NAME\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |
| --- | --- |
| *Write in standard form and name each polynomial based on degree and number of terms.* | |
| 1.  3.  5. | 2.  4.  6. |
| *Simplify each expression. Put all answers into standard form.*   |  |  | | --- | --- | | 7. | 8. | | 9. | 10. | | 11. | 12. | | 13. |  | | |

Find the product. Write your answer in standard form. NO WORK = NO CREDIT! Use another piece of paper if you need to.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 1. 2x (8 – x – 3x2) | | 1. -3x (-x2 + 3x – 4) | | 1. x3(4 – x) |
| 1. -x2 (2x2 – 4x + 6)   7. (5x – 5)(5x + 5) | | 5. 5(-x2 – 4x + 6)  8. (x + 3)(4x2 – x) | | 6. -2x( -6x2 + 8 – x)  9. (3n + 4)2 |
| 10. (x – 11)2 | 11. (x + 4)(x2 – 2x + 3) | | 12. (3t + 5)(t – 3) | |

CHALLENGE: (x3 – 2x2 + 3x – 5) (x3 – 3x2 + 6)

13. Classify the product in numbers 7 and 8.

**BULL’S EYE- Working with Polynomials NAME\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

In the center of the Bull’s Eye, there is a polynomial. In the first ring, there is another polynomial. In the following ring, add the two polynomials. In the next ring, subtract \*\*x+2 – (poly)\*\* the two polynomials, and in the last ring, multiply the two polynomials. Lastly, classify the **product** according to number of terms.

CLASSIFY

x + 5

3x3

2x2 – 7x

MULTIPLY

SUBTRACT

ADD

POLY

x + 2

4x + 1

x2 + 2x + 4

#2

#3

#4

#5

#1