Name_____ **Instructor**_____

Date_____

SHOW YOUR WORK!

The skills needed to complete this worksheet are required for our work in Chapter 4. Please seek help as soon as possible if you have difficulty completing any of these sections.

Learning Objectives

A. Add and subtract integers.
B. Multiply integers.
C. Write the factors of a number.
D. Use the distributive property.
E. Use special products to multiply binomials.
F. Divide a polynomial by a monomial.

OBJECTIVE A: Add and subtract integers.

Add or subtract. (*See Sections 1.4–1.5*)

1. −17 + 25
2. –25 + (–9)
3. −18 + 6
4. – 4 – 15
5. 3 –14
6. 15 + (–2)

OBJECTIVE B: Multiply integers.

Multiply. (*See Section 1.6, objective A)*

7. (–14) (3)
8. −4 (–15)
9. −7 (8)
10. 5(–9)

Objective C: Write the factors of a number.

List the factors of each number. (*See Examples 1 and 2, page R-2*)

11. 18
12. 30
13. 45
14. 56

15. Fill in the chart by finding two numbers with the given product and sum. The first column has been filled as an example for you.

Two numbers	3, 8								
Their product	24	18	−42	60	−30	−36	−45	81	−56
Their Sum	11	9	−11	−19	13	0	−4	−18	1

OBJECTIVE D: Use the distributive property.

Multiply. (*See Section 3.5, objective B)*

16. $5x^2\left(3x^4-8x\right)$

17. $8ab\left(2b^2-4a+3\right)$

18. $-6x^2y\left(2x^2-4xy+3y^2\right)$

19. $-\left(5x^2-15x+4\right)$

OBJECTIVE E: Divide a polynomial by a monomial.

Divide the polynomials. (*See Section 3.7, objective A)*

20. $\dfrac{15x^6-40x^3}{5x^2}$

21. $\dfrac{m^3n-m^2n^4}{mn}$

22. $\dfrac{16ab^3-32a^2b+24ab}{8ab}$

23. $\dfrac{-14x^7+28x^6-7x^5}{-7x^5}$

OBJECTIVE F: Use special products to multiply binomials.

Find each product. (*See Section 3.6)*

24. $(y-4)(y-15)$

25. $(p+6q)(p-6q)$

26. $(4x-7)(3x+4)$

27. $(5b+3)^2$