Name: _____

Date Started: _____ Date Completed: _____ Score: _____

Learning Activity Sheet
Multiplication and Division of Polynomials

INSTRUCTIONS: Answer the following questions. Encircle the letter of the correct answer.

1. What will be the product when you multiply $(-9b^2)$ and (b^5)?

   A. $-9b^3$ C. $-45b^3$
   B. $-9b^7$ D. $45b^{10}$

2. If you multiply $(4a)$ and $(2a-b)$, what will be the result?

   A. $8a-b$ C. $6a^2-b$
   B. $2a-ab$ D. $8a^2-4ab$

3. What is the product of the expression: $-3a(a^2-4a+1)$?

   A. $3a^3-12a^2+3a$ C. $3a^2-12a+3$
   B. $-3a^3+12a^2-3a$ D. $-3a^2+12a-3$

4. What will be the product when $(a^2b+ab^2-a^3b^3)$ is multiplied by $(9a^2b)$?

   A. $10a^2b+10a^3b^3-10a^5b^4$ C. $9a^4b^2+9a^3b^3+9a^5b^4$
   B. $-10a^2b-10a^3b^3+10a^5b^4$ D. $9a^4b^2+9a^3b^3-9a^5b^4$

5. What is the product if the sum of $(-9m)$ and $(3m+7n)$ will be multiplied by $(12m^2)$?

   A. $18m^3+19m^2n$ C. $+72m^3-84m^2n$
   B. $-18m^3-19m^2n$ D. $-72m^3+84m^2n$

6. What is the quotient if you divide $8x^2+20$ by $4x$?

   A. $2x^2+5x$ C. $8x^2+24x$
   B. $2x+5$ D. $8x^2+20x+4x$

7. What should you multiply to $(-2b)$ to get $(8b^2)$?

   A. $2b$ C. $-6b^3$
   B. $-4b$ D. $16b^3$

8. What is the quotient when $(-16m^2n^2-40m^2n)$ is divided by $(-8m^2n)$?

   A. $2n+5$ C. $-2n+5$
   B. $-2n-5$ D. $2n-5$

9. What will be the result if you divide $(12x^3y+18x^2y^2-15xy^2)$ by $(3xy)$?

   A. $4x^2-6xy+5y$ C. $9x^2-15xy+12y$
   B. $4x^2+6xy-5y$ D. $9x^2+15xy-12y$

10. What is the quotient if $(6a^2b+9ab^2-18a^3)$ is divided by $(3a)$?

    A. $12a^3b+27a^2b^2-9a^4$ C. $2ab^2-2a^2b-9a^2$
    B. $4a^2b+3ab^2-6a^3$ D. $2ab+3b^2-6a^2$