

Name: _____ is Smart! 😊

Math 115 Spring 2026
Mr. Sahney

Standard 5 Practice

1. Classify each polynomial by degree

a. $2x^3 - 5x^2 + 6x + 1$

b. $-7x^4 + 3x^5 - 8$

c. $2 + 8x^2 - 6x^4 - x^3$

d. $10x - 4$

e. $-6x^2$

2. Let $f(x) = 3x^2 + 4x - 2$. Evaluate each of the following

a. $f(-1)$

b. $f(4)$

c. $f(0)$

d. $f(a + 2)$

3. What does it mean for a polynomial to be in standard form? Give an example

4. Add or Subtract the following expressions:

a. $(7a^3 + 6a^2 - 4a - 13) + (-3a^3 - 4a^2 + 6a + 17)$

b. $(-5x^2 - 4x + 7) + (2x^2 - 6x + 12)$

c. $(6y^2 + 24y + 5) - (-4y^2 + 3y + 1)$

d. $(3w^2 + 2w - 5) - (5w^2 - 3w + 2)$

5. Simplify each expression using the appropriate property. Write your answer using positive exponents only

a. $x^3 \cdot x^5$	b. $\frac{y^6}{y^2}$	c. $(z^8)^4$
d. $\frac{h^4}{h^6}$	e. $b^2 \cdot b^{-8}$	f. $\frac{c^{12}}{c^{12}}$

6. Simplify each expression. Write your answer using positive exponents only.

a. $(5m^8n^{-1})^2$	b. $(4a^2b^4)^{-2}(8a^6b^7)$	c. $(3x^2)^{-4}$
d. $\frac{12x^5y^3}{2x^3y^7}$	e. $\frac{-10x^7y^8}{15x^{-2}y^{11}}$	f. $\frac{(2a^3b^{-2})^{-2}}{2ab^{-1}c^0}$