Exam 2 Review Problems

1. Simplify fully. Use only positive exponents in your answers.

(a) $\left(\frac{2c^4d}{c^{-3}d^5}\right)^2$

(b) $(5x^7y^{-3})^{-2}$

(c) $(a^2b)^5(4a^{-10}b^3)$

2. (a) Express in scientific notation: .000877

(b) Express without exponents: 3.62×10^7

3. For the polynomial $3x^6 - 8x^2$:

(a) Is it a monomial, binomial, trinomial, or none of these?

(b) What is the degree of the polynomial?

4. Add: $(6a^3 + 7a^2 + 3a) + (4a^3 - 3a^2 + 9a)$

5. Subtract: $(3x^2 - 7x + 2) - (5x^2 + 4x - 10)$

6. Multiply:

(a) $(6b - 2)(5b + 3)$

(b) $(8x - 1)(2x^2 + 3x - 5)$

7. Factor out the greatest common factor: $12a^2b^5 - 30a^4b^4 + 6a^3b$

8. Factor: $2ab - 8b + 3a - 12$ (factor by grouping)