MATH 143 005 – Quiz – 1/29/07 – Name: ____________________________

Pencils and Erasers Only – No Calculators Needed.

1  Simplify: \((x^2 + 4x + 8) - (x^2 - 4x + 8)\)

2  Carry out the operations and simplify: \((x^2 + 4x + 8)(x^2 - 4x + 8)\)

3  Simplify to a form not involving negative exponents:
   (a) \((-2xy^2)^3\)
   (b) \(\left(\frac{2a^{-3}}{ac^{-2}}\right)^{-4}\)

Please turn over!
4. Combine into a single fraction in lowest terms: \[
\frac{2x + 5}{x^2 - 6x + 9} - \frac{2x}{x^2 - 9}
\]

5. Factor completely: \[24x^3 - 30x^2 + 9x\]