

NAME: _____

MATH 11009

HOMEWORK #1 (11 pts)

SPRING 2009

SHOW ALL WORK FOR FULL CREDIT — PLEASE CIRCLE YOUR FINAL ANSWER

DUE: WEDNESDAY, JANUARY 28, 2009 AT THE BEGINNING OF CLASS

NO EXCEPTIONS!

1. (2 pts each) Use the rules of exponents to simplify each expression. Write answers with positive exponents only.

(a) $\frac{36x^{-7}y^{-9}}{42x^6y^{-4}}$

(b) $(3x^2y^{-3})^{-2} (2x^5y^{-4})^3$

(c) $\frac{(x^{-3}y^4)^{-3}}{3x^{-2}y^7}$

2. (1 pt) Find $\left(\frac{3}{4}\right)^2 + 2^{-4} - 5^{-1}$

3. (1 pt each) Perform the indicated operations and simplify.

(a) $(3x - 8)^2$

(b) $3x(4x - 3)(2x + 5)$

4. (1 pt each) Factor completely.

(a) $12x^3 + 14x^2 - 40x$

(b) $20x^3 + 8x^2 - 45x - 18$