

Math 70 Quiz #9
November 24, 2008

Name: _____

Show all work. No calculators are permitted on this quiz.

1. Simplify the following. Express your answers with positive exponents.

(a) (1 pts.) $\frac{x^{10}}{x^3}$

(e) (1 pts.) $(9x^5)^2$

(b) (1 pts.) $\frac{-4y^2}{2y^8}$

(f) (1 pts.) $\left(\frac{xy}{2}\right)^3$

(c) (1 pts.) $\frac{5a^2b^3}{15ab^3}$

(g) (1 pts.) 6^{-2}

(d) (1 pts.) $(x^3)^4$

(h) (1 pts.) $x^{-3}y$

2. (1 pt.) Write 6.82×10^{-5} in decimal form.

3. (1 pt.) Write 93,000,000 in scientific notation.

Here are **some** exponent rules. Use them wisely.

$$x^a \cdot x^b = x^{a+b}$$

$$\frac{x^a}{x^b} = x^{a-b}$$

$$\frac{x^a}{x^a} = x^0 = 1$$

$$(x^a)^b = x^{ab}$$

$$(xy)^a = x^a y^a$$

$$\left(\frac{x}{y}\right)^a = \frac{x^a}{y^a}$$