Quiz 7

Name: _____

Solutions given without showing work will earn a zero. This quiz is closed-book. Circle your answers.

Problem 1. [**4 points**] Completely simplify the following expression. There should not be negative exponents in your answer (though there may be negative numbers).

$$(4x^{-2}y^4)^{-1}(-2x^3y^{-2})^2$$

$$\frac{(-2x^3y^{-2})^2}{4x^{-2}y^4} = \frac{4x^6y^{-4}}{4x^{-2}y^4} = \frac{x^6 x^2}{y^4 y^4} = \boxed{\frac{x^8}{y^8}}$$

Problem 2. [**2 points**] Write -8,023,100,000 in scientific notation.

$$\boxed{-8.0231 \times 10^9}$$

Problem 3. [**2 points**] Write 8×10^{-2} in decimal notation.

$$\boxed{0.08}$$

Problem 4. [**2 points**] Write the number 600 million in scientific notation.

$$600 \times 1,000,000$$
$$= 600 \times 10^6$$
$$= 6 \times 10^2 \times 10^6 = \boxed{6 \times 10^8}$$