Quiz 7

Name: _____

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

Problem 1. [**3 points**] Divide $\dfrac{4.8 \times 10^{12}}{8 \times 10^{-2}}$. Write your answer in scientific notation.

$0.6 \times 10^{14} = \boxed{6 \times 10^{13}}$

Problem 2. [**2 points**] Find the domain on $f(x) = \sqrt{1 - 2x}$

$$1 - 2x \geq 0$$
$$1 \geq 2x$$
$$\boxed{\left\{\; x \mid \tfrac{1}{2} \geq x \right\}}$$

Problem 3. [**2 points**] Evaluate the following radicals or state if they do not exist.

(a) $\sqrt[3]{-125}$ -5

(b) $\sqrt[4]{-16}$ DNE

Problem 4. [**3 points**] Completely simplify the following expression. There should not be negative exponents in your answer (though there may be negative numbers).

$$(2x^{-2}y^4)^{-2}(-2xy^{-2})^2$$

$2^{-2} x^4 y^{-8} (-2)^2 x^2 y^{-4} = \dfrac{4 x^4 x^2}{4 y^8 y^4} = \boxed{\dfrac{x^6}{y^{12}}}$