Name: _____ **Quiz 1**

Math 111 Intro to Math Methods and Applications – Crawford **11 September 2013**

Books, notes (in any form), and calculators are not allowed. *Show all your work.* Good Luck! [Form A1]

1. (1 pts) Write the fraction in simplest form: $\dfrac{16}{60}$

2. (6 pts) Evaluate the following expressions and write the result in simplest form.

(a). $\dfrac{2}{3} + \dfrac{4}{9}$

(b). $\dfrac{7}{8} \div \dfrac{3}{4}$

(c). $2 \cdot \dfrac{1}{3} \cdot \dfrac{2}{5}$

3. (3 pts) Simplify and write without exponents.

(a). 5^{-2}

(b). $\dfrac{-3^2}{3^5 \cdot 3^{-2}}$

4. (5 pts) Simplify the following expressions so that only positive exponents remain.

(a). $\left(2x^{-4}y^{3}\right)\cdot\left(3xy^{-1}\right)$

(b). $\left(\dfrac{a^{2}b^{3}}{a^{4}bc^{-2}}\right)^{-3}$

5. (5 pts) Simplify the following expressions and leave your answers with radicals. [Assume nonnegative variables.]

(a). $\sqrt[3]{32x^{6}y^{4}}$

(b). $\sqrt{10ab^{8}}\sqrt{10a^{11}b^{3}}$