

**Foundations for College Algebra**  
**University of North Georgia**  
**Fall 2015**  
**Quiz #8**

Name: Key Date: October 14, 2015

Simplify. Show all work!

$$1. \frac{\frac{5 \cdot 2}{x \cdot 7}}{\frac{11}{x^3}} = \frac{\frac{35 - 2x}{7x}}{-\frac{11}{x^3}} = \frac{35 - 2x}{7x} \cdot -\frac{x^3}{11} = \frac{(35 - 2x)(x^3)}{77}$$

or

$$\frac{35x^3 - 2x^3}{77}$$

$$2. (n^3)^3 \cdot 2n^{-2}$$

$$\frac{n^9}{1} \cdot \frac{2}{n^2} = \boxed{2n^7}$$

$$3. (2x^0y^2)^{-3} \cdot 2yx^3$$

$$\frac{1}{(2 \cdot 1 \cdot y^2)^3} \cdot \frac{2yx^3}{1} = \frac{1}{8y^6} \cdot \frac{2yx^3}{1} = \boxed{\frac{x^3}{4y^5}}$$

$$4. \frac{(3a^3c^2)^3}{a^3b^{-2}c^2 \cdot a^{-4}c^3} = \frac{3^3 \cdot (a^3)^3 \cdot (c^2)^3 \cdot b^2}{a^{-1} \cdot c^5} = \frac{27a^9c^6b^2}{a^{-1}c^5}$$

$$= \boxed{27a^{10}c^6b^2}$$