

Dr. Katiraie MA160 Quiz 1 Form A (Sections 1.1 – 1.2) Spring 2013

Name \_\_\_\_\_

Total Possible Points = 20 Points

**Show all your work.**

1. Let  $g(x) = x^2 + 4x + 3$  and  $f(x) = \frac{-1}{3}x + 10$  (3 points)

a. Find x when $f(x) = 6$	b. Find x when $g(x) = 0$	c. Find $g(a+1)$
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2. For the linear function  $-5x + 10y = 30$   
**SHOW work** to find each of the following (3 points)

- a) The slope is \_\_\_\_\_
- b) The y-intercept is \_\_\_\_\_
- c) The x-intercept is \_\_\_\_\_

3. The length of a rectangular room is 7 feet more than its width. If the perimeter of the room is 150 feet, find the width and length of the room. (2 points)  
(Hint: Perimeter of Rectangle =  $2L + 2W$ )



4. Solve the following equations algebraically:

(4 points)

a.  $\frac{6x}{-x+1} = -2$

b.  $\frac{2x+1}{7} = \frac{5x-1}{2}$

5. Solve the following algebraically:

(4 Points)

a) $x^2 - 16 = 0$	b) $y^2 - 8y = -7$	c) $4x^2 - 9 = 0$	$x^2 - 2x = 3$
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6. Perform the indicated operations. Simplify your answers.

(4 pts)

a) $\left(\frac{x^3}{y^9}\right)^{\frac{2}{3}}$	b) $\sqrt{x} \cdot \sqrt[3]{x}$
c) $\sqrt[3]{x^{10}}$	d) $-2x^{-7}$