Dr. Katiraie MA160 Quiz 1 Form A  (Sections 0.1---0.6) Summer 08

Name _____                    Total Possible Points = 20 Points
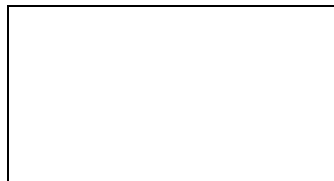
## Show all your work.

1. Let $g(x) = x^2 - 6x + 5$ and $f(x) = \dfrac{-1}{2}x + 20$                    (3 points)

| a.  Find x when $f(x) = 6$ | b.  Find x when $g(x) = 0$ | c. Find $g(a+1)$ |
|---|---|---|
| | | |

2.  For the linear function      $-3x + 9y = 30$

**SHOW work** to find each of the following                    (2 points)

a)  The slope is _____

b)  The y-intercept is _____

c)  The x-intercept is _____

3. The length of a rectangular room is 4 feet more than its width.  If the perimeter of the room is 100 feet, find the width and length of the room.                    (3 points)

4. Solve the following equations: (4 points)

a. $\dfrac{2x}{x+1} = 3$

b. $\dfrac{3x+1}{7} = \dfrac{2x-1}{2}$

5. Solve the following: (4 Points)

| a) $x^2 - 81 = 0$ | b) $y^2 - 6y = 7$ | c) $9x^2 - 64 = 0$ | $x^2 - 3x = 40$ |
|---|---|---|---|
| | | | |

6. Perform the indicated operations. Simplify your answers. (4 pts)

| a) $\left(\dfrac{x^2}{y^6}\right)^{\frac{3}{2}}$ | b) $\sqrt{x} \cdot \sqrt[3]{x}$ |
|---|---|
| c) $\sqrt[3]{x^7}$ | d) $-5x^{-3}$ |