Math 001.12 **Quiz # 2** **Sem. I , Oct 25 , 2005**

Name :_____ **ID. # :** _____ **SER. # :** ____

1. For the quadratic equation $2x^2 + 3x + 6 = 0$: (4 pts)

   (i) Find the **sum and product** of the roots of the equation (without finding the roots).

   (ii) Solve the equation by **completing the square**.

2. Solve the equation $\sqrt{3x-5} - \sqrt{x+2} - 1 = 0$ (3 pts)

3. The denominator of a fraction is 4 more than the numerator. If the numerator is increased by 5 and the denominator is decreased by 7, the resulting number is 2, find the original fraction.

   (3 pts)

Math 001.18 **Quiz # 2** **Sem. I , Oct 25 , 2005**

Name :_____ **ID. # :** _____ **SER. # :** ____

1. Find the values of k for which the quadratic equation $2x^2 + kx + x + 1 = 0$ has two **equal real** roots. (3.5 pts)

2. Solve the equation $\sqrt{2x+4} + \sqrt{x+3} - 1 = 0$ (3.5 pts)

3. The sides of a **right triangle** are of length x , $x+7$, and $x+8$. Find the perimeter and the area of the triangle. (3 pts)

Math 001.30 **Quiz # 2** **Sem. I , Oct 25 , 2005**

Name :_____ **ID. # :** _____ **SER. # :** ____

1. Which one of the following equations is a **contradiction**? (Explain your answer) (3 pts)

   (i) $(x+3)(x-2)=1$ (ii) $(x-3)(x+3)+10=x^2+1$ (iii) $\frac{x+1}{x-1}=\frac{2}{x-1}$

2. Solve the equation $\sqrt[3]{\sqrt{x+1}+\sqrt{2x+3}+7}=2$ (4 pts)

3. The length of a rectangle is 3 meters more than twice the width of the rectangle. If the area of the rectangle is 27, find the perimeter of the rectangle. (3 pts)