

**ECONOMICS 207**  
**SPRING 2010**  
**LABORATORY EXERCISE 4**  
8<sup>th</sup> February 2010

**Problem 1: Solve the following equations for  $x$**

a.  $3x^2 + 11x - 4 = 0$

b.  $(6x^2 + 11x - 2)^{1/3} = 2$

c.  $2x^{2/3} - 7x^{1/3} + 6 = 0$

$$d. \frac{2x^2 + 9x + 4}{x^2 + x - 12} = 0$$

$$e. \frac{8x^2 - 3x}{x^2 - x + 1} = 2$$

$$f. 8x^2 - 2x - 15 = 0$$

$$g. x^2 + 3x - 12 = 0$$

$$h. x^4 - 20x^2 + 64 = 0$$

$$i. 2x^2 + 18x - 3 = x - 2x^2 + 12$$

$$j. 5x^2 + 3x = 2$$

$$k. 3x^2 - 7x - 6 = 0$$

$$l. 11x^2 - 17x = 2(x + 1)$$

$$m. x^{6/5} = 2x$$

$$n. x^{-4/5} = 2x^{-1}$$

$$o. x^{8/3} - 4x^2 = 0$$

$$p. 5x^{-1/2} = 1$$

$$q. 24x^{-3/4} = 3$$

**Problem 2:**

$$\begin{aligned} 2x + y &= 1 \\ x + y &= -1 \end{aligned}$$

a. Solve the above system of equation using *substitution*.

b. Solve the above system of equation using *elimination*.

**Problem 2:**

$$2x + 3y = 14$$

$$x + 2y = 9$$

a. Solve the above system of equation using *substitution*.

b. Solve the above system of equation using *elimination*.

**Problem 5:**

$$x - 7y - z = 4$$

$$2x + y + z = 5$$

$$3x - y - z = 0$$

- a. Solve the above system of equation using *substitution*.

b. Solve the above system of equation using *elimination*.