

**D:(4 pts) Coupled Linear Equations**

Solve the following two equations for  $x$  and  $y$ :  $\begin{cases} x - 2y = 3 \\ 2x + y = 4 \end{cases}$ .

$x =$  \_\_\_\_\_

$y =$  \_\_\_\_\_

**E:(4 pts) Quadratic Equation**

Find all solutions of the following equation:  $x^2 - 5x + 3 = 0$ .

$x =$  \_\_\_\_\_ or \_\_\_\_\_

D:(4 pts) Coupled Linear Equations

Solve the following two equations for  $x$  and  $y$ :  $\begin{cases} x - 2y = 3 \\ 2x + y = 4 \end{cases}$

$$x = \underline{+2.2}$$

$$y = \underline{-0.4}$$

$$x = 3 + 2y$$

$$2(3 + 2y) + y = 4$$

$$5y = -2 \rightarrow y = -2/5 = \underline{-0.4}$$

$$x = 3 + 2(-0.4) = \underline{+2.2}$$

E:(4 pts) Quadratic Equation

Find all solutions of the following equation:  $x^2 - 5x + 3 = 0$ .

$$x = \underline{+4.30} \text{ or } \underline{+0.697}$$

$$x_{\pm} = \frac{1}{2} \left\{ 5 \pm \sqrt{(-5)^2 - 4(1)(3)} \right\}$$

$$= \frac{1}{2} \left\{ 5 \pm \sqrt{13} \right\}$$

$$= \underline{+4.30278} \text{ or } \underline{+0.69722}$$