

(C1-3.3a) Name:

### Homework Questions 3 – Linear and Non-Linear Simultaneous Equations

Solve the following linear-non linear simultaneous equations

1.  $x^2 + y^2 = 13$   
 $y = x + 1$

2.  $y = 3x + 11$   
 $y = x^2 + 4x + 5$

$$\begin{array}{l} x = 2 \\ y = -3 \end{array}$$

$$\begin{array}{l} x = 2 \\ y = -3 \end{array}$$

3.  $y = x^2 + 7x - 10$   
 $y = 3x + 11$

4.  $x^2 + y^2 = 2$   
 $y = 2x + 1$

$$\begin{array}{l} x = 3 \\ y = -7 \end{array}$$

$$\begin{array}{l} x = 0.2 \\ y = -1 \end{array}$$

5.  $x^2 + y^2 = 4$   
 $y = x + 2$

6.  $y = x^2 + 3x + 2$   
 $y = 4x + 8$

$$\begin{array}{l} x = 0 \\ y = -2 \end{array}$$

$$\begin{array}{l} x = 3 \\ y = -2 \end{array}$$

7.  $xy = 15$   
 $y = 2x - 1$

8.  $y = 4x + 14$   
 $xy = 12$

$$\begin{array}{l} x = 3 \\ y = -2.5 \end{array}$$

$$\begin{array}{l} x = -1.5 \\ y = -2 \end{array}$$