

SOLVING SIMULTANEOUS EQUATIONS

LINEAR AND NON-LINEAR

NAME:

DATE:

Solve the following pair of simultaneous equations:

$$y = x^2 + 7x \quad \text{eqn 1}$$

$$y = 2x - 6 \quad \text{eqn 2}$$

Substituting $y = 2x - 6$ into eqn 1 to solve for x

$$y = x^2 + 7x$$

$$= x^2 + 7x$$

$$x^2 + 7x = 0$$

$$x^2 = 0$$

Solving quadratic using AC Method

$$x^2 + 2x + \quad + 6 = 0$$

$$x(\quad) + (x + 2) = 0$$

$$(x + 2)(\quad) = 0$$

$$(\quad) = 0 \text{ OR } (\quad) = 0$$

$$x = \quad \text{OR } x = \quad$$

Substituting values of x into eqn 2 to find y values.

$$y =$$

When x =

$$y = 2(\quad) -$$

$$y = \quad - 6$$

$$y =$$

$$\therefore x = -2 \text{ when } y =$$

When x =

$$y = \quad (-3) - 6$$

$$y = -6 -$$

$$y =$$

$$\text{and } x =$$

$$\text{when } y =$$

