1. Solve the simultaneous equations

$$x^2 + y^2 = 29$$

$$y - x = 3$$

.....

(Total 7 marks)

2. Bill said that the line $y = 6$ cuts the curve $x^2 + y^2 = 25$ at two points.

(a) By eliminating y show that Bill is incorrect.

(2)

(b) By eliminating y, find the solutions to the simultaneous equations

$$x^2 + y^2 = 25$$

$$y = 2x - 2$$

$x =$ ..... $y =$ .....

or $x =$ ..... $y =$ .....

(6)

(Total 8 marks)

3. By eliminating y, find the solutions to the simultaneous equations

$$x^2 + y^2 = 25$$
$$y = x - 7$$

x = ... y = ...

or x = ... y = ...

(Total 6 marks)

4. By eliminating y, find the solutions to the simultaneous equations

$$y - 2x = 3$$

$$x^2 + y^2 = 18$$

$x =$…… $y =$……

or $x =$…… $y =$……

(Total 7 marks)

5. Solve the simultaneous equations

$x^2 + y^2 = 5$

$y = 3x + 1$

x = ... y = ...

or x = ... y = ...

(Total 6 marks)

6. Solve the simultaneous equations

$x + y = 4$

$x^2 + y^2 = 40$

$x =$....., $y =$ .....

or

$x =$....., $y =$ .....

(Total 7 marks)

7. By eliminating x, find the solutions to the simultaneous equations

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

$x =$ …….., $y =$ …….

or $x =$ …….., $y =$ …….

(Total 7 marks)