

1. a)

$$\begin{array}{rclcrcl}
 I & 4x & + & y & = & 6 \\
 II & 7x & - & y & = & 27 \\
 \hline
 I + II & 11x & & & = & 33 & | : 11 \\
 & x & & & = & 3 \\
 \hline
 x \text{ in } I & 12 & + & y & = & 6 & | - 12 \\
 & & & y & = & -6
 \end{array}$$

Probe in II:

$$\begin{array}{l}
 \text{l.S.: } 7 \cdot 3 - (-6) = 21 + 6 = 27 \\
 \text{r.S.: } 27
 \end{array} \left. \vphantom{\begin{array}{l} \text{l.S.: } 7 \cdot 3 - (-6) = 21 + 6 = 27 \\ \text{r.S.: } 27 \end{array}} \right\} \checkmark$$

$$L = \{(3/-6)\}$$

b)

$$\begin{array}{rclcrcl}
 I & 4x & + & 4y & = & 32 \\
 II & 20x & - & 4y & = & 40 \\
 \hline
 I + II & 24x & & & = & 72 & | : 24 \\
 & x & & & = & 3 \\
 \hline
 x \text{ in } I & 12 & + & 4y & = & 32 & | - 12 \\
 & & & 4y & = & 20 & | : 4 \\
 & & & y & = & 5
 \end{array}$$

Probe in II:

$$\begin{array}{l}
 \text{l.S.: } 20 \cdot 3 - 4 \cdot 5 = 60 + 20 = 40 \\
 \text{r.S.: } 40
 \end{array} \left. \vphantom{\begin{array}{l} \text{l.S.: } 20 \cdot 3 - 4 \cdot 5 = 60 + 20 = 40 \\ \text{r.S.: } 40 \end{array}} \right\} \checkmark$$

$$L = \{(3/5)\}$$

c)

$$\begin{array}{rclcrcl}
 I & 2x & - & 2y & = & -4 \\
 II & -8x & + & 2y & = & 28 \\
 \hline
 I + II & -6x & & & = & 24 & | : (-6) \\
 & x & & & = & -4 \\
 \hline
 x \text{ in } II & 32 & + & 2y & = & 28 & | - 32 \\
 & & & 2y & = & -4 & | : 2 \\
 & & & y & = & -2
 \end{array}$$

Probe in I:

$$\begin{array}{l}
 \text{l.S.: } 2 \cdot (-4) - 2 \cdot (-2) = -8 + 4 = -4 \\
 \text{r.S.: } -4
 \end{array} \left. \vphantom{\begin{array}{l} \text{l.S.: } 2 \cdot (-4) - 2 \cdot (-2) = -8 + 4 = -4 \\ \text{r.S.: } -4 \end{array}} \right\} \checkmark$$

$$L = \{(-4/-2)\}$$

d)

$$\begin{array}{rclcrcl}
 I & 6x & + & 3y & = & 9 \\
 II & -15 & - & 3y & = & -36 \\
 \hline
 I + II & -9x & & & = & -27 & | : (-9) \\
 & x & & & = & 3 \\
 \hline
 x \text{ in } I & 18 & + & 3y & = & 9 & | - 18 \\
 & & & 3y & = & -9 & | : 3 \\
 & & & y & = & -3
 \end{array}$$

Probe in II:

$$\begin{array}{l}
 \text{l.S.: } -15 \cdot 3 - 3 \cdot (-3) = -45 + 9 = -36 \\
 \text{r.S.: } -36
 \end{array} \left. \vphantom{\begin{array}{l} \text{l.S.: } -15 \cdot 3 - 3 \cdot (-3) = -45 + 9 = -36 \\ \text{r.S.: } -36 \end{array}} \right\} \checkmark$$

$$L = \{(3/-3)\}$$

2. a)

$$\begin{array}{rclcrcl}
 I & x & + & y & = & 4 \\
 II & x & - & 2y & = & -8 \\
 \hline
 I - II & & & 3y & = & 12 & | : 3 \\
 & & & y & = & 4 \\
 \hline
 y \text{ in } I & x & + & 4 & = & 4 & | - 4 \\
 & x & & & = & 0
 \end{array}$$

Probe in II:

$$\begin{array}{l}
 \text{l.S.: } 0 - 24 = -8 \\
 \text{r.S.: } -8
 \end{array} \left. \vphantom{\begin{array}{l} \text{l.S.: } 0 - 24 = -8 \\ \text{r.S.: } -8 \end{array}} \right\} \checkmark$$

$$L = \{(0/4)\}$$

b)

$$\begin{array}{rclcrcl}
 I & 5x & - & 5y & = & 5 \\
 II & 5x & + & 4y & = & -22 \\
 \hline
 II - I & & & 9y & = & -27 & | : 9 \\
 & & & y & = & -3 \\
 \hline
 y \text{ in } I & 5x & + & 15 & = & 5 & | - 15 \\
 & 5x & & & = & -10 & | : 5 \\
 & x & & & = & -2
 \end{array}$$

Probe in II:

$$\begin{array}{l}
 \text{l.S.: } 5 \cdot (-2) + 4 \cdot (-3) = -10 - 12 = -22 \\
 \text{r.S.: } -22
 \end{array} \left. \vphantom{\begin{array}{l} \text{l.S.: } 5 \cdot (-2) + 4 \cdot (-3) = -10 - 12 = -22 \\ \text{r.S.: } -22 \end{array}} \right\} \checkmark$$

$$L = \{(-2/-3)\}$$

c)

$$\begin{array}{rclcl}
 I & x & - & 4y & = & 6 \\
 II & -2x & - & 4y & = & 6 \\
 \hline
 I - II & 3x & & & = & 0 & | : 3 \\
 & x & & & = & 0 \\
 \hline
 x \text{ in } I & 0 & - & 4y & = & 6 & | : (-4) \\
 & & & y & = & -1,5
 \end{array}$$

Probe in II:

$$\begin{array}{l}
 \text{l.S.: } -2 \cdot 0 - 4 \cdot (-1,5) = 0 + 6 = 6 \\
 \text{r.S.: } 0
 \end{array} \bigg\} \checkmark$$

$$L = \{(0/-1,5)\}$$

d)

$$\begin{array}{rclcl}
 I & 2x & - & 5y & = & 4 & | \cdot 3 \\
 II & 3x & - & 4y & = & -1 & | \cdot 2 \\
 \hline
 I & 6x & - & 15y & = & 12 \\
 II & 6x & = & -8x & = & -2 \\
 \hline
 II - I & & & 7y & = & -14 & | : 7 \\
 & & & y & = & -2 \\
 \hline
 y \text{ in } I & 2x & + & 10 & = & 4 & | - 10 \\
 & 2x & & & = & -6 & | : 2 \\
 & x & & & = & -3
 \end{array}$$

Probe in II:

$$\begin{array}{l}
 \text{l.S.: } 3 \cdot (-3) - 4 \cdot (-2) = -9 + 8 = -1 \\
 \text{r.S.: } -1
 \end{array} \bigg\} \checkmark$$

$$L = \{(-3/-2)\}$$