

Name: _____

Date: Sept. 24th

Knowledge	Application	Thinking/Inquiry	Communication
10 /10	N/A	N/A	2 /2

• Show full solutions for full marks.

• Communication marks will be based on proper form and use of symbols.

1. Solve the following systems by substitution.

a) $2x + 3y = 6$
 $x + y = 3$

(S/5)

④ $x + y = 3$

$y = -x + 3$

$2x + 3(-x + 3) = 6$

$2x - 3x + 9 = 6$

$-x = 6 - 9$

$-x = -3$

$x = 3$

$x + y = 3$

$3 + y = 3$

$y = 3 - 3$

$y = 0$

$(3, 0)$

∴ $(3, 0)$ is the solution to the following systems.

$$\begin{array}{l|l} \text{Ls} & \text{Rs} \\ 2x + 3y & 6 \end{array}$$

$$\begin{array}{l|l} 2(3) + 3(0) & 6 \end{array}$$

$$\begin{array}{l|l} 6 + 0 & 6 \end{array}$$

$$\begin{array}{l|l} 6 & 6 \end{array}$$

$$\begin{array}{l|l} \checkmark & \checkmark \end{array}$$

$$\text{Ls} = \text{Rs}$$

$$\begin{array}{l|l} \text{Ls} + \text{Rs} & \\ x + y & 3 \end{array}$$

$$\begin{array}{l|l} 3 + 0 & 3 \end{array}$$

$$\begin{array}{l|l} 3 & 3 \end{array}$$

$$\begin{array}{l|l} \checkmark & \checkmark \end{array}$$

$$\text{Ls} = \text{Rs}$$

Good

$\frac{12}{12} + 2 \text{ Good } \$$

b) $8x - 6 = 2y$
 $6x - 2y - 5 = 0$

5/5

① $8x - 6 = 2y$
 $\frac{8x-6}{2} = \frac{2y}{2}$
 $4x - 3 = y$

$6x - 2y - 5 = 0$
 $6x - 2(4x - 3) - 5 = 0$
 $6x - 8x + 6 - 5 = 0$
 $6x - 8x = -6 + 5$
 $-2x = -1$
 $x = 0.5$

$8x - 6 = 2y$
 $8(0.5) - 6 = 2y$
 $4 - 6 = 2y$
 $-2 = 2y$
 $-1 = y$

$(0.5, -1)$

LS	RS
$8x - 6$	$2y$
$8(0.5) - 6$	$2(-1)$
$4 - 6$	-2
-2	-2
✓	✓
LS=RS	

LS	RS
$6x - 2y - 5$	
$6(0.5) - 2(-1) - 5$	0
$3 - (-2) - 5$	0
$3 + 2 - 5$	0
0	0
✓	✓
LS=RS	

$\therefore (0.5, -1)$ is the solution to the following systems.