Name.....No.....M.3/.....

2 worksheet

Solve the following systems of equations.

1) $x + y = 20$

$x = y - 4$

$x + y = 20$ ——— ①

$x = y - 4$ ——— ②

From ②, substitute the value of x in ①.

$(y - 4) + y = 20$

[redacted] $- 4 = 20$

$2y = 20 + 4$

$2y =$ [redacted]

$y = \frac{24}{2}$

$y =$ [redacted]

Substitute the value of y in ②.

$x =$ [redacted]

$x = 8$

Therefore, the solution of the system of equations is [redacted].

LIVEWORKSHEETS

Name.....No.....M.3/.....

2 worksheet

2) $x + y = 23$

$y = x - 5$

$x + y = 23$ ——— ①

$y = x - 5$ ——— ②

From ②, substitute the value of y in ①.

$x + (x - 5) = 23$

[redacted] $= 23$

$2x = 23 + 5$

$2x =$ [redacted]

$x = \frac{28}{2}$

$x =$ [redacted]

Substitute the value of x in ②.

$y =$ [redacted]

$y = 9$

Therefore, the solution of the system of equations is [redacted].

LIVEWORKSHEETS

Name.....No.....M.3/.....

2 worksheet

3) $3x - y = 5$

$2x + 3y = 6$

$3x - y = 5$ ——— ①

$2x + 3y = 6$ ——— ②

From ①, find the value of y.

$y = 3x - 5$ ——— ③

From ③, substitute the value of y in ②.

$2x + 3(3x - 5) =$ [redacted]

$2x +$ [redacted] $- 15 = 6$

$11x =$ [redacted]

$11x = 21$

$x = \frac{21}{11}$ or $1\frac{10}{11}$

Substitute the value of x in ③.

$y = 3\left(\frac{21}{11}\right) -$ [redacted]

$y = \frac{63}{11} -$ [redacted]

$y = \frac{8}{11}$

Therefore, the solution of the system of equations is $\left(1\frac{10}{11}, \frac{8}{11}\right)$.

LIVEWORKSHEETS