

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.

$(y - 4) + y = 20$

$\blacksquare - 4 = 20$

$2y = 20 + 4$

$2y = \blacksquare$

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

$y = \blacksquare$

Substitute the value of y in ②.

$x = \blacksquare$

$x = 8$

Therefore, the solution of the system of equations is $\blacksquare$.

2 worksheet

$$2) \quad x + y = 23$$

$$y = x - 5$$

$$x + y = 23 \quad \text{--- ①}$$

$$y = x - 5 \quad \text{--- ②}$$

From ②, substitute the value of y in ①.

$$x + (x - 5) = 23$$

$$\text{[redacted]} = 23$$

$$2x = 23 + 5$$

$$2x = \text{[redacted]}$$

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

$$x = \text{[redacted]}$$

Substitute the value of x in ②.

$$y = \text{[redacted]}$$

$$y = 9$$

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

2 worksheet

$$3) \quad 3x - y = 5$$

$$2x + 3y = 6$$

$$3x - y = 5 \quad \text{--- ①}$$

$$2x + 3y = 6 \quad \text{--- ②}$$

From ①, find the value of y.

$$y = 3x - 5 \quad \text{--- ③}$$

From ③, substitute the value of y in ②.

$$2x + 3(3x - 5) =$$

$$2x + -15 = 6$$

$$11x =$$

$$11x = 21$$

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

Substitute the value of x in ③.

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

$$y = \frac{63}{11} -$$

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

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