

Chapter 19 Exercise 19.1

Q. 1. $8 + 6(5) = 38$

$$8 + 30 = 38$$

$$38 = 38$$

True

$$8 - 5 = 3$$

$$3 = 3$$

True

$\therefore x = 8, y = 5$ is correct.

Q. 2. $7 + 6(2) = 19$

$$7 + 12 = 19$$

$$19 = 19$$

True

$$7 + 3(2) = 10$$

$$7 + 6 = 10$$

$$13 = 10$$

False

$\therefore x = 7, y = 2$ is correct.

Q. 3. $2 + (-1) = 8$

$$2 - 1 = 8$$

$$1 = 8$$

False

$\therefore x = 2, y = -1$ is not correct.

Q. 4. $5(4) + 4(1) = 34$

$$20 + 4 = 34$$

$$24 = 34$$

False

$\therefore x = 4, y = 1$ is not correct.

Q. 5. $0 - 5(1) = -5$

$$-5 = -5$$

True

$$3(0) - 2(1) = -2$$

$$0 - 2 = -2$$

$$-2 = -2$$

True

$\therefore x = 0, y = 1$ is correct.

Q. 6. $-3(-5) + 10(-2) = 5$

$$15 - 20 = 5$$

$$-5 = 5$$

False

$\therefore x = -5, y = -2$ is not correct.

Q. 7. $-4 + 9(2) = 14$

$$-4 + 18 = 14$$

$$14 = 14$$

True

$$-2(-4) + 2 = 10$$

$$8 + 2 = 10$$

$$10 = 10$$

True

$\therefore a = -4, b = 2$ is correct.

Q. 8. $4(1) - 3(-2) = 14$

$$4 + 6 = 14$$

$$10 = 14$$

False

$\therefore p = 1, q = -2$ is not correct.

Q. 9. $-2(-5) = 3 - (-7)$

$$10 = 3 + 7$$

$$10 = 10$$

True

$$1 = 4(-5) - 3(-7)$$

$$1 = -20 + 21$$

$$1 = 1$$

True

$\therefore m = -5, n = -7$ is correct.

Exercise 19.2

Q. 1. $x + y = 5$

$$\begin{array}{r} x + y = 5 \\ x - y = 1 \\ \hline \end{array}$$

$$2x = 6$$

$$x = 3$$

$$3 + y = 5$$

$$y = 2$$

$$x = 3, y = 2$$

Q. 2. $x + y = 14$

$$\begin{array}{r} x + y = 14 \\ x - y = 2 \\ \hline \end{array}$$

$$2x = 16$$

$$x = 8$$

$$8 + y = 14$$

$$y = 6$$

$$x = 8, y = 6$$

Q. 3. $x + y = 15$

$$\begin{array}{r} x + y = 15 \\ x - y = 7 \\ \hline \end{array}$$

$$2x = 22$$

$$x = 11$$

$$11 + y = 15$$

$$y = 4$$

$$x = 11, y = 4$$

Q. 4. $x + y = 21$

$$\begin{array}{r} x + y = 21 \\ x - y = 7 \\ \hline \end{array}$$

$$2x = 28$$

$$x = 14$$

$$14 + y = 21$$

$$y = 7$$

$$x = 14, y = 7$$

Q. 5. $2x + y = 12$

$$\begin{array}{r} 2x + y = 12 \\ x - y = 3 \\ \hline \end{array}$$

$$3x = 15$$

$$x = 5$$

$$2(5) + y = 12$$

$$y = 2$$

$$x = 5, y = 2$$

Q. 6. $3x + y = 13$

$$\begin{array}{r} 3x + y = 13 \\ 2x - y = 7 \\ \hline \end{array}$$

$$5x = 20$$

$$x = 4$$

$$3(4) + y = 13$$

$$y = 1$$

$$x = 4, y = 1$$

Q. 7. $x + 2y = 11$

$$\begin{array}{r} x + 2y = 11 \\ 3x - 2y = 9 \\ \hline \end{array}$$

$$4x = 20$$

$$x = 5$$

$$5 + 2y = 11$$

$$2y = 6$$

$$y = 3$$

$$x = 5, y = 3$$

Q. 8. $2x + y = 7$

$$\begin{array}{r} 2x + y = 7 \\ x - y = 2 \\ \hline \end{array}$$

$$3x = 9$$

$$x = 3$$

$$2(3) + y = 7$$

$$y = 1$$

$$x = 3, y = 1$$

Q. 9. $5x + 2y = 16$

$$\begin{array}{r} 5x + 2y = 16 \\ 4x - 2y = 2 \\ \hline \end{array}$$

$$9x = 18$$

$$x = 2$$

$$5(2) + 2y = 16$$

$$2y = 6$$

$$y = 3$$

$$x = 2, y = 3$$

Q. 10. $2x + y = 11$

$$\begin{array}{r} 2x + y = 11 \\ \ominus 2x \oplus 4y = \ominus 6 \\ \hline \end{array}$$

$$5y = 5$$

$$y = 1$$

$$2x + 1 = 11$$

$$2x = 10$$

$$x = 5$$

$$x = 5, y = 1$$

Q. 11. $3x + 2y = 13$

$$\begin{array}{r} 3x + 2y = 13 \\ 2x - 2y = 2 \\ \hline \end{array}$$

$$5x = 15$$

$$x = 3$$

$$3(3) + 2y = 13$$

$$2y = 4$$

$$y = 2$$

$$x = 3, y = 2$$

Q. 12. $x + 2y = 10$

$$\begin{array}{r} x + 2y = 10 \\ 2x - 2y = 2 \\ \hline \end{array}$$

$$3x = 12$$

$$x = 4$$

$$4 + 2y = 10$$

$$2y = 6$$

$$y = 3$$

$$x = 4, y = 3$$

Q. 13. $x + 3y = 10$

$$\begin{array}{r} x + 3y = 10 \\ 15x - 3y = 54 \\ \hline \end{array}$$

$$16x = 64$$

$$x = 4$$

$$4 + 3y = 10$$

$$3y = 6$$

$$y = 2$$

$$x = 4, y = 2$$

Q. 14. $5x + 5y = 15$

$$\begin{array}{r} 5x + 5y = 15 \\ 6x - 5y = 7 \\ \hline \end{array}$$

$$11x = 22$$

$$x = 2$$

$$5(2) + 5y = 15$$

$$10 + 5y = 15$$

$$5y = 5$$

$$y = 1$$

$$x = 2, y = 1$$

Q. 15. $3x - 3y = 15$

$$\underline{2x + 3y = 15}$$

$$5x = 30$$

$$x = 6$$

$$6 - y = 5$$

$$6 - 5 = y$$

$$y = 1$$

$$x = 6, y = 1$$

Q. 16. $x + 3y = 4$

$$\underline{6x - 3y = 24}$$

$$7x = 28$$

$$x = 4$$

$$4 + 3y = 4$$

$$3y = 0$$

$$y = 0$$

$$x = 4, y = 0$$

Q. 17. $12x + 4y = 16$

$$\underline{5x - 4y = 1}$$

$$17x = 17$$

$$x = 1$$

$$3(1) + y = 4$$

$$y = 1$$

$$x = 1, y = 1$$

Q. 18. $14x - 7y = 35$

$$\underline{x + 7y = 10}$$

$$15x = 45$$

$$x = 3$$

$$2(3) - y = 5$$

$$6 - 5 = y$$

$$y = 1$$

$$x = 3, y = 1$$

Q. 19. $5x + 5y = 45$

$$\underline{6x - 5y = 10}$$

$$11x = 55$$

$$x = 5$$

$$5 + y = 9$$

$$y = 4$$

$$x = 5, y = 4$$

Q. 20. $2x + 2y = 10$

$$\underline{11x - 2y = 3}$$

$$13x = 13$$

$$x = 1$$

$$1 + y = 5$$

$$y = 4$$

$$x = 1, y = 4$$

Q. 21. $4x + 6y = 24$

$$\underline{21x - 6y = 51}$$

$$25x = 75$$

$$x = 3$$

$$2(3) + 3y = 12$$

$$3y = 6$$

$$y = 2$$

$$x = 3, y = 2$$

Q. 22. $14x - 6y = 28$

$$\underline{\ominus 15x \oplus 6y = 30}$$

$$-x = -2$$

$$x = 2$$

$$7(2) - 3y = 14$$

$$14 - 3y = 14$$

$$y = 0$$

$$x = 2, y = 0$$

Q. 23. $2x - 2y = 2$

$$\underline{\ominus x \oplus 2y = \oplus 2}$$

$$x = 4$$

$$4 - y = 1$$

$$4 - 1 = y$$

$$y = 3$$

$$x = 4, y = 3$$

Q. 24. $x - 4y = 0$

$$\underline{\ominus 4x \oplus 4y = \oplus 24}$$

$$-3x = -24$$

$$x = 8$$

$$8 - 4y = 0$$

$$8 = 4y$$

$$y = 2$$

$$x = 8, y = 2$$

Q. 25. $x - y = 4$

$$\underline{\ominus x \oplus 2y = \ominus 1}$$

$$-3y = 3$$

$$y = -1$$

$$x - (-1) = 4$$

$$x + 1 = 4$$

$$x = 3$$

$$x = 3, y = -1$$

Q. 26. $x - y = -3$

$$\underline{2x + y = 0}$$

$$3x = -3$$

$$x = -1$$

$$-1 - y = -3$$

$$-1 + 3 = y$$

$$y = 2$$

$$x = -1, y = 2$$

Q. 27. $3x - 3y = 0$

$$\underline{\ominus 3x \oplus 5y = \ominus 32}$$

$$-8y = -32$$

$$y = 4$$

$$x = 4$$

$$x = 4, y = 4$$

Q. 28. $x + 2y = 0$

$$\underline{\oplus 2x \oplus 2y = \oplus 18}$$

$$3x = 18$$

$$x = 6$$

$$6 + 2y = 0$$

$$2y = -6$$

$$y = -3$$

$$x = 6, y = -3$$