

Mathematics

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(Chapter – 4) (Linear Equations in two Variables)(Exemplar Problems)
(Class – IX)

Exercise 4.1

Write the correct answer in each of the following:

Question 12:

If a linear equation has solutions $(-2, 2)$, $(0, 0)$ and $(2, -2)$, then it is of the form

(A) $y - x = 0$

(B) $x + y = 0$

(C) $-2x + y = 0$

(D) $-x + 2y = 0$

Answer 12:

(B) $x + y = 0$

Solution:

For option (A), the given equation is $y - x = 0$

At $(-2, 2)$

$$\text{LHS} = y - x$$

$$= 2 - (-2) = 2 + 2$$

$$= 4 \neq 0$$



Hence, **LHS \neq RHS**

For option (B), the given equation is $x + y = 0$

At $(-2, 2)$

$$\text{LHS} = y + x$$

$$= 2 + (-2) = 2 - 2$$

$$= 0 = \text{RHS}$$

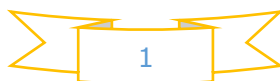
Hence, **LHS = RHS**

At $(0, 0)$

$$\text{LHS} = y + x$$

$$= 0 + 0$$

$$= 0 = \text{RHS}$$



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Hence, **LHS = RHS**

At (2, -2)

$$\begin{aligned}\text{LHS} &= y + x \\ &= -2 + 2 \\ &= 0 = \text{RHS}\end{aligned}$$

Hence, **LHS = RHS**

For option (C), the given equation is $-2x + y = 0$

At (-2, 2)

$$\begin{aligned}\text{LHS} &= -2x + y \\ &= -2 \times (-2) + 2 = 4 + 2 \\ &= 6 \neq 0\end{aligned}$$

Hence, **LHS \neq RHS**

For option (D), the given equation is $-x + 2y = 0$

At (-2, 2)

$$\begin{aligned}\text{LHS} &= -x + 2y \\ &= -(-2) + 2 \times 2 = 2 + 4 \\ &= 6 \neq 0\end{aligned}$$

Hence, **LHS \neq RHS**

