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)

LHS $= y - x$

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

$= 4 \neq 0$

Hence, LHS ≠ RHS

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

At (–2, 2)

LHS $= y + x$

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

$= 0 =$ RHS

Hence, LHS = RHS

At (0, 0)

LHS $= y + x$

$= 0 + 0$

$= 0 =$ RHS

Hence, LHS = RHS

At (2, –2)

LHS = y + x

= –2 + 2

= 0 = RHS

Hence, LHS = RHS

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

At (–2, 2)

LHS = –2x + y

= –2× (– 2) + 2 = 4 + 2

= 6 ≠ 0

Hence, LHS ≠ RHS

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

At (–2, 2)

LHS = –x + 2y

= –(– 2) + 2×2 = 2 + 4

= 6 ≠ 0

Hence, LHS ≠ RHS