

$$5(2x - 3) - 3(3x - 7) = 5$$

ANSWER:

We have:

$$5(2x - 3) - 3(3x - 7) = 5$$

$$\Rightarrow 10x - 15 - 9x + 21 = 5$$

$$\begin{aligned} &\Rightarrow 10x - 9x = 5 + 15 \\ &\quad - 21 \qquad \qquad \qquad \text{(By transposition)} \end{aligned}$$

$$\Rightarrow x = 20 - 21$$

$$\Rightarrow x = -1$$

CHECK: Substituting $x =$
 $- 1$ in the given equation, we get:

$$\text{LHS: } 5(2x - 3) - 3(3x - 7)$$

$$= 10x - 15 - 9x + 21$$

$$= 10 \times (-1) - 15 - 9 \times (-1) + 21$$

$$= -10 - 15 + 9 + 21$$

$$= -25 + 30$$

$$= 5$$

$$\text{RHS: } 5$$

$$\therefore \text{LHS} = \text{RHS}$$

Hence, $x =$

$- 1$ is a solution of the given equation.