Solving equations

Solving an equation by performing some operation on both sides.

Solving an equation involves performing the same operations on the expressions on either side of the "=" sign so that the value of the variable is found without disturbing the balance.

Example: Solve 2x + 4 = 10

Consider 2x + 4 = 10

⇒2x + 4− 4=10 − 4 [Subtracting 4 from both LHS and RHS] ⇒2x=6

⇒2 x/2=6/2 [Dividing both LHS and RHS by 2] ⇒x=3

Transposing Method

In this method, we transpose the numbers from one side of the equation to the other side so that all the terms with variable come on one side and all the constants come on another side.
While transposing the numbers the sign of the terms will get changed. i.e. Negative will become positive and positive will become negative.

Example
x + 11 = 35

Solution
Now we will transfer 11 from LHS to RHS and its sign will get reversed.
x = 35 – 11
x = 24

Note:

Thus, in transforming terms from L.H.S. to R.H.S.
'+ quantity' becomes '– quantity'
'– quantity' becomes '+ quantity'
'× quantity' becomes ÷ quantity
'÷ quantity' becomes '× quantity'