# IF VARIABLE IS IN BOTH SIDES OF THE EQUAL SIGN:

1) GOAL: Move all variables to one side (choose the side!)

Move all numbers to other side

Solve for the variable ("cross the River")

If the variable ends up being negative

↳ *CHANGE ALL SIGNS TO THEIR OPPOSITE*

Example:

In Short:
- numbers end up in one side
- all variables must be moved and end up on the same side

$$x + 4 = 2x - 6$$

this means this number is in the wrong place (move it!)

↓

I'M CHOOSING THIS SIDE FOR THE x TO "LIVE" IN

$$x + 4 = 2x - 6$$

$$+6 \quad x + 4 = 2x \Rightarrow 10 + x = 2x$$

this x is in the wrong side... move it

Now, this number is in its correct side of the "=" sign

$$10 + x = 2x \Rightarrow 10 = 2x - x$$

becomes (−)

$$\boxed{10 = x}$$