

Problem Solving

When tackling a math problem (or any problem for that matter) you are encouraged to use the following four steps to problem solving.

Understand the Problem, Develop a Plan, Carry Out the Plan, Check

Here is a non-math example:

An athletic team has a problem. They want to beat the opposing team.

They understand the problem. They realise that they need to acquire more points than their opponent.

The coach develops a game plan and shares his strategy with the players.

The team makes every effort to carry out the coach's plan.

The team checks the scoreboard after the game to see if they were successful.

Here is a math example:

We want to solve the equation $4x - 5 = 21$

We understand that we are trying to find the value of x that makes the sentence true.

We decide to use the addition and division properties of equality.

We carry out the plan as follows.

$$4x - 5 = 21 \quad \text{Given Equation}$$

$$4x = 16 \quad \text{We subtracted 5 from both sides}$$

$$x = 4 \quad \text{We divided both sides by 4}$$

To check, we simply substitute $x = 4$ into $4x - 5 = 21$ and get $4(4) - 5 = 21$, which is true, so it checks.