

The gold is located in Treasure Chest B, and only Treasure Chest C is TRUE.

### **Solution**

Solutions to this problem will rely heavily upon logical thinking. Remember there can ONLY be ONE true statement in this puzzle.

Let's look at some *scenarios*.

#### ***If the gold is in A.....***

- It follows that statement A must be true.
- Therefore statement B is also true, giving 2 true statements.
- The gold cannot be in A

#### ***This rules out the gold in D by the same logic.***

The gold must therefore be located in Treasure Chest B or C.

#### ***If the gold is in C.....***

- It follows that statement C is false.
- Statements A and D are also false.
- And clearly statement B is false.
- There is therefore no true statement. The gold cannot be in C.

By a process of elimination, the last scenario must be true.

#### ***If the gold is in B.....***

Go through the same logic to demonstrate this is the only solution!

### Note

Logic is an essential component of computational thinking. Your programs will often be free of syntax errors, but the logic of your program may be incorrect, resulting in unexpected events or outputs. Sudoku is a popular game requiring logical thinking from humans.

(see <http://www.cs4fn.org/logic/sudoku/leafletsudoku.php>)



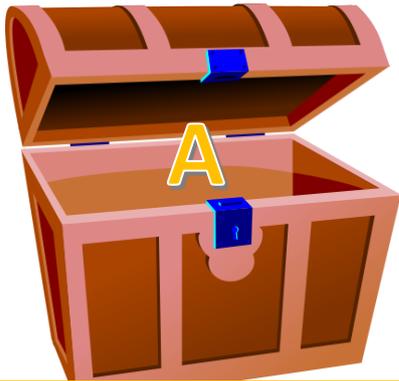
**Is there a difference between a human thinking logically and your program using logic to think?**

**A Variation on the Problem to test your logic and your algorithm**

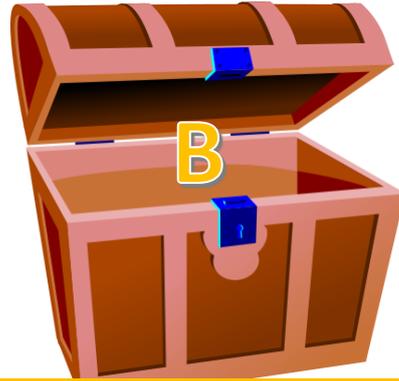
Try out your logic again on the problem below;

Re-program the treasure chests to see if your code solves this variation on the problem;

Test your algorithm to see if it can handle new conditions (is it robust!);



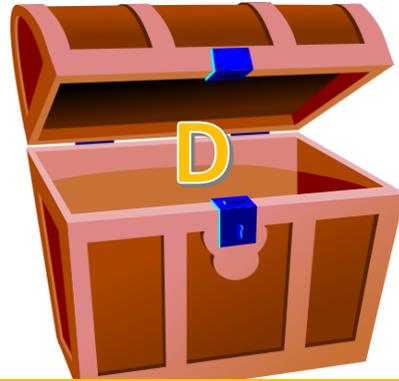
The Gold is not in here



The Gold is in here



The Gold is in B or D



The Gold is not in here