

## Answer on Question #63411 – Math – Discrete Mathematics

### Question

You are getting engaged and your fiancée has hidden the engagement ring. If only one

statement is true, determine which statement is true? Where is the ring?

Statement 1: The ring is in this box  $\rightarrow A$

Statement 2: The ring is not in this box  $\rightarrow B$

Statement 3: The ring is not in box A  $\rightarrow$

Use truth table to show the answer.

### Solution

Truth table

	Ring is in box		
	A	B	C
Statement 1	true	false	false
Statement 2	true	false	true
Statement 3	false	true	true

Therefore, if the ring is in box B, then only the statement 3 is true.

The ring could be in the box B if only one statement is true.

**Answer:** The ring could be in the box B if only one statement is true.