COMP111 - Tutorial 4 Answers

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November 5, 2020

4. *DerivedAssertions*= $\{A_1(a), A_2(a), A_1(b), A(a), C(a)\}$

6. The first statement, $\{A(a), B(b), A(x) \rightarrow B(x)\} \models B(a)$, is correct. This is because the assertion, $A(a)$, follows the rule, $A(x) \rightarrow B(x)\} \models B(a)$, to become $B(a)$. This then validates the statement as $B(a)$ is in the set *DerivedAssertions*.

   Statement two is incorrect as the list of *DerivedAssertions* is:

   $$\{A(a), B(b), B(a)\}$$

   As $A(b)$ isn't in that set then the statement is incorrect.