

# Evaluation Test Questions

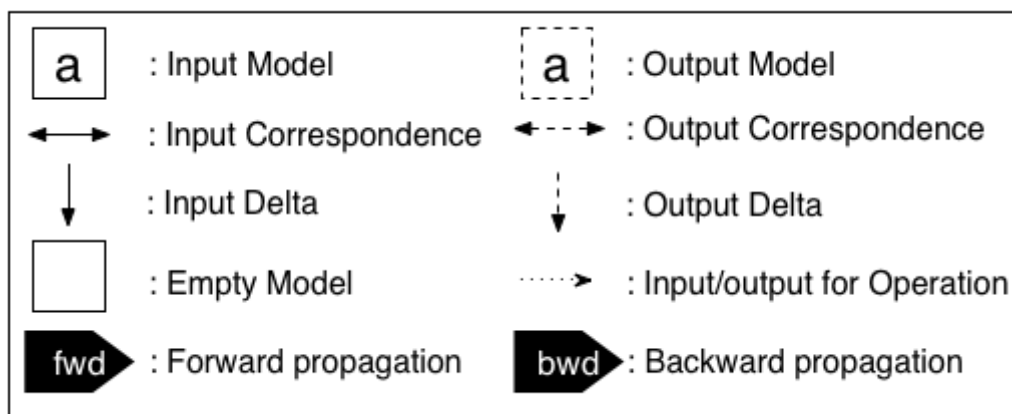
\* Required

## Legend and Assumptions

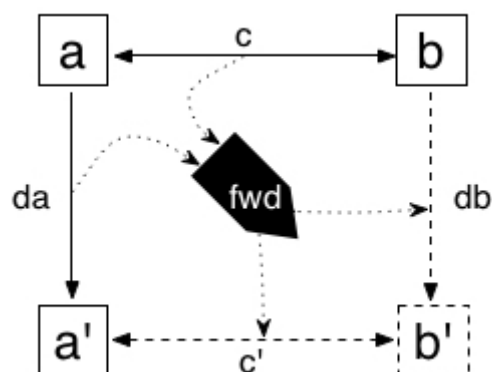
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For easy reference, below is the legend used in the tutorial and for all diagrams in the questions.

For all questions we assume a consistency relation  $R$  is given, and that the forward and backward propagation operations are correct with respect to  $R$ . Models with the same label are assumed to be identical, while models with different labels, e.g.  $\langle a \rangle$  and  $\langle a' \rangle$  are assumed to be different.



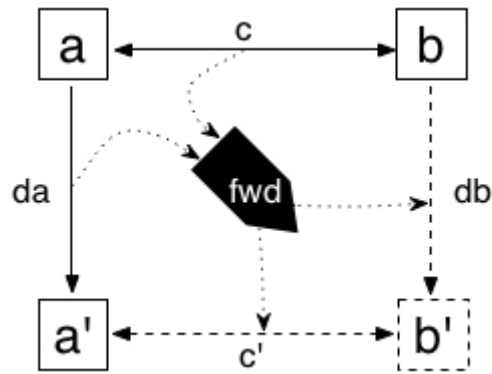
1. Do you think the model  $b'$  must be unique? \*



Mark only one oval.

- ☐ Yes, there is always exactly one such model  $b'$  that is consistent with  $a'$
- ☐ No, there might be many models  $b'$  that are consistent with  $a'$

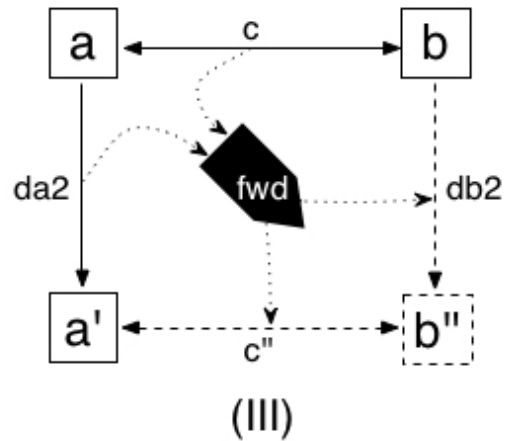
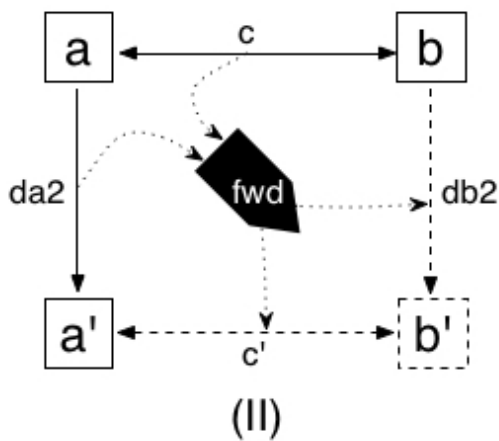
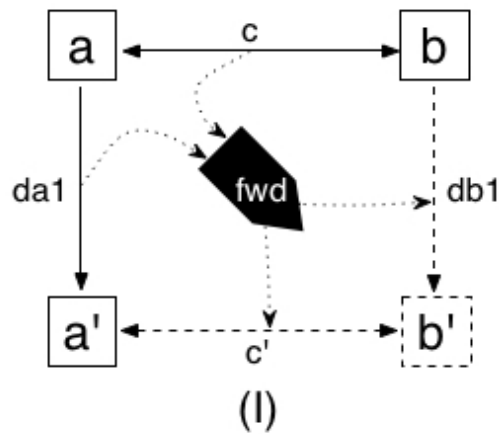
2. Do you think such a model  $b'$  must exist? \*



Mark only one oval.

- ☐ Yes, there is always at least one such  $b'$
- ☐ No, such a model  $b'$  might not exist at all

3. Given the situation depicted in (I), which of the diagrams (II) or (III) is to be expected in general? \*

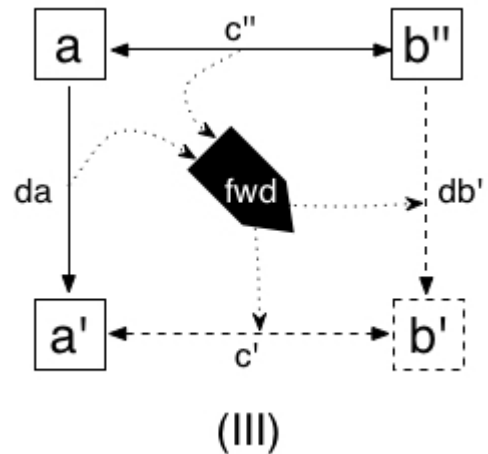
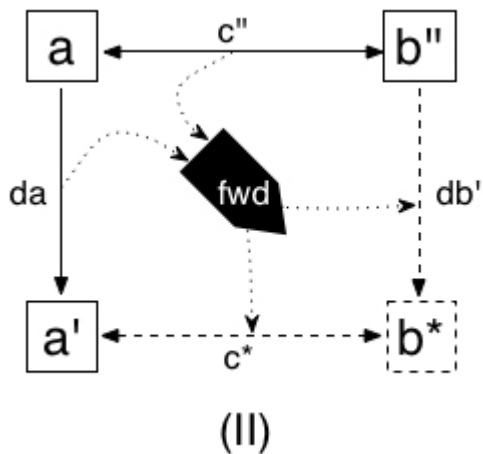
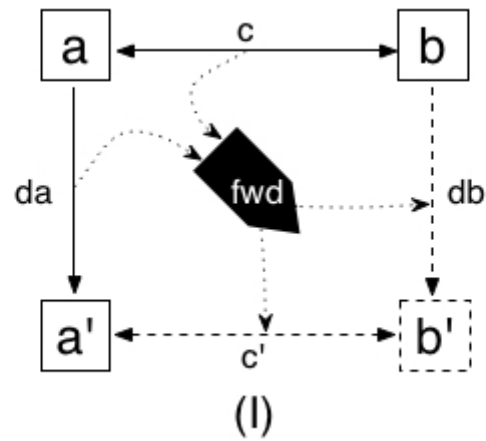


Mark only one oval.

☐ (II) is to be expected; even though a different delta  $da2: a \rightarrow a'$  is propagated, it results in the same model  $a'$  as  $da1$  so  $db2$  (produced by  $fwd(da2, c)$ ) must also result in the same model  $b'$  as  $db1$

☐ (III) is to be expected; a different delta  $da2: a \rightarrow a'$  is propagated so the resulting consistent model  $b''$  can be completely different from  $b'$

4. Given the situation depicted in (I), which of the diagrams (II) or (III) is to be expected in general? \*



Mark only one oval.

☐ (II) is to be expected; even though the same delta  $da$  is propagated, the result depends on the previous model  $b''$ . As  $b''$  is different from  $b$ ,  $b^*$  will be in general different from  $b'$

☐ (III) is to be expected; the same delta  $da: a \rightarrow a'$  is propagated so this must result in the same model  $b'$  as in (I)

