

# Computationele logica

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## 1 Exercise 1

1. The sentence  $\theta$  encoding all information:
2. A representation of the situation model  $\mathbf{M}$ :  
 $\mathcal{A} = \{a, b, q\}$  the agents Alice, Bob, and the Queen  
 $\Phi = \{r_a, w_a, r_b, w_b\}$  the colors of the hats for a and b

This is an epistemic model: YES / NO

3. Separately a and b look in their mirrors and see their red hats, represented in the event model  $\Sigma$  with four actions:

This is an epistemic model: YES / NO

This is a doxastic model: YES / NO

4. The update product of the two models  $\mathbf{M} \otimes \Sigma$  :

This is an epistemic model: YES / NO

This is a doxastic model: YES / NO

## 2 Exercise 2