

# First-Order Logic for-kl-2

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## 1 fol-kr-2

1.  $\text{Occupation}(\text{Emily}, \text{Surgeon}) \vee \text{Occupation}(\text{Emily}, \text{Lawyer})$
2.  $\text{Occupation}(\text{Joe}, \text{Actor}) \wedge \exists x \, x \neq \text{Actor} \, \text{Occupation}(\text{Joe}, x)$
3.  $\forall x \, \text{Occupation}(x, \text{Surgeon}) \rightarrow \text{Occupation}(x, \text{Doctor})$
4.  $\neg \exists x \, \text{Customer}(\text{Joe}, x) \wedge \text{Occupation}(x, \text{Lawyer})$
5.  $\exists x \, \text{Boss}(x, \text{Emily}) \wedge \text{Occupation}(x, \text{Lawyer})$
6.  $\exists x \, \text{Occupation}(x, \text{Lawyer}) \wedge \forall y \, \text{Customer}(y, x) \rightarrow \text{Occupation}(y, \text{Doctor})$
7.  $\forall x \, \text{Occupation}(x, \text{Surgeon}) \rightarrow \exists y \, \text{Customer}(x, y) \wedge \text{Occupation}(x, \text{Lawyer})$