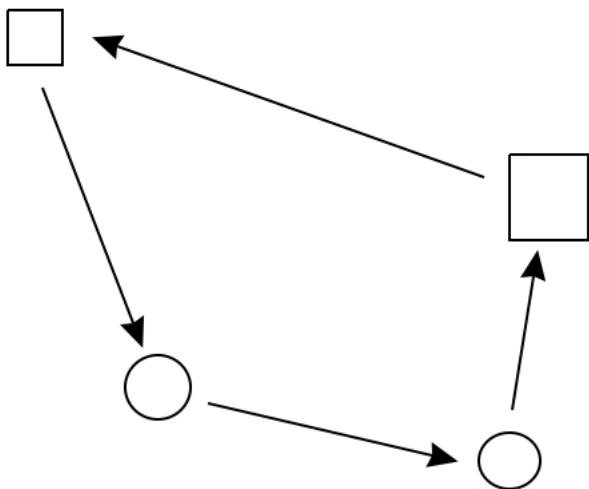


C241 HW9 Mini

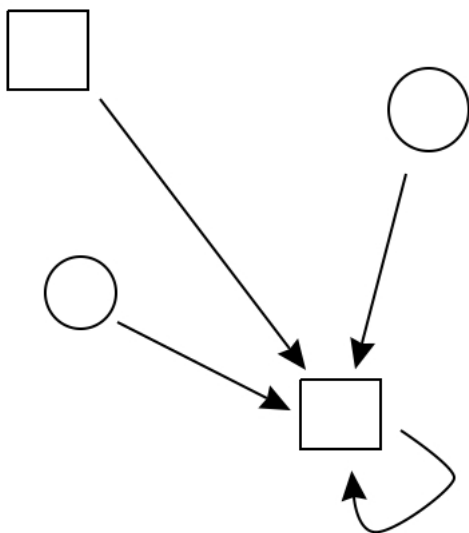
Zac Monroe

October 2018

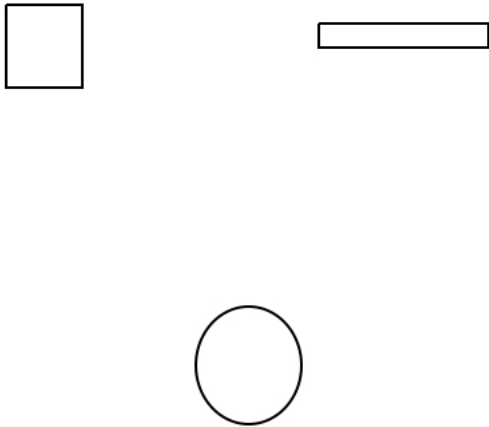
1. Here is my toy model for #1.



2. Here is my toy model for #2.



3. Here is my toy model for #3.



4. No such toy model can exist. $\exists x \forall y R(x, y)$ requires that all shapes point to at least one common shape (which implies that *every* shape definitely would have to point to one shape (or more)), but $\nexists x \exists y R(x, y)$ requires that *not* all shapes point to one shape (or more); thus, there is a contradiction.

5. Here is my toy model for #5.

