

Security

Ross Tate

October 29, 2014

Exercise 1. Prove that the 2-category $\mathbf{MULTICAT}$ is powered. I am content if you can construct the power multicategory $\mathbf{E} \pitchfork \mathbf{M}$ and the necessary functor $\mathbf{E} \rightarrow \mathbf{M}_{\mathbf{MULTICAT}}(\mathbf{E} \pitchfork \mathbf{M}, \mathbf{M})$ and show that any multicategory \mathbf{D} with a functor $\mathbf{E} \rightarrow \mathbf{M}_{\mathbf{MULTICAT}}(\mathbf{D}, \mathbf{M})$ has a 1-cell from \mathbf{D} to $\mathbf{E} \pitchfork \mathbf{M}$. The remaining requirements need to hold but do not need to be proved.