# An example sheet Question

Thomas Forster

December 24, 2010

This is not a model tripos question, more the kind of thing you could find on an example sheet.

**EXERCISE 1** *Define $x << y$ by $\mathcal{P}(x) \in \mathcal{P}(y)$. Prove that $<<$ is wellfounded. Obviously you are not to use the axiom of foundation! Also it is artificially easy if you use the Axiom of Choice. The proof I have in mind is an elementary combinatorial one that does not use either of these axioms—tho' it does use replacement. It doesn't even use excluded middle.*