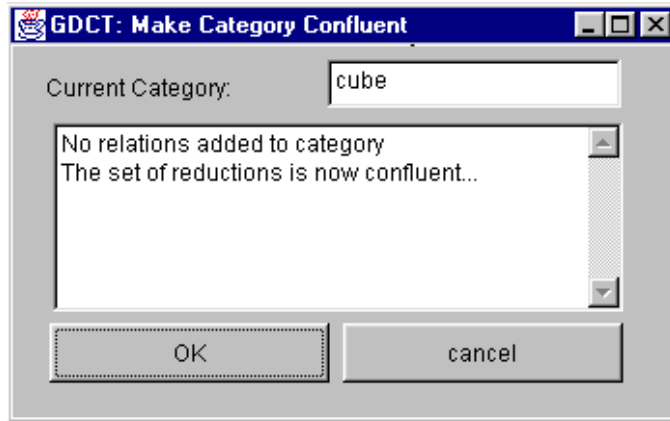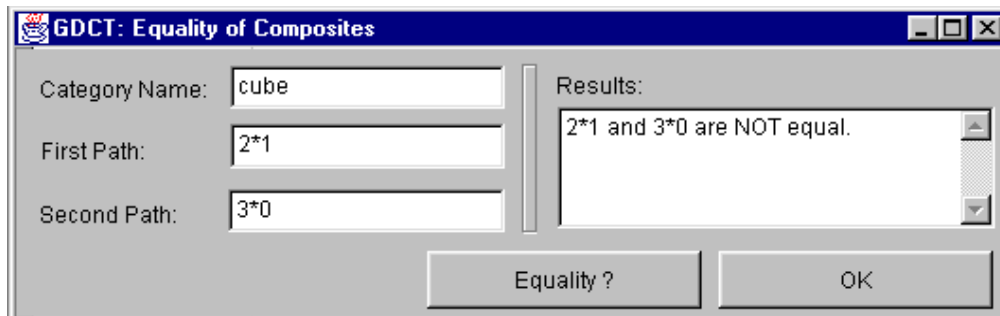## Make Confluent

Select Tools | Make Confluent. This command applies the Knuth-Bendix algorithm to the currently displayed category with arrows ordered in their storage order.

Relations which are added to the current category are reported. To add these relations to the current category click "Ok", or click "Cancel" to keep the category in its current from.

Equality of Composites

To test two (possibly composite) arrows for equality in the current category select Tools | Equality of Composites. A dialogue allows entry of two paths.

WARNING: The category must be confluent for valid results. Domains and codomains of paths must match.
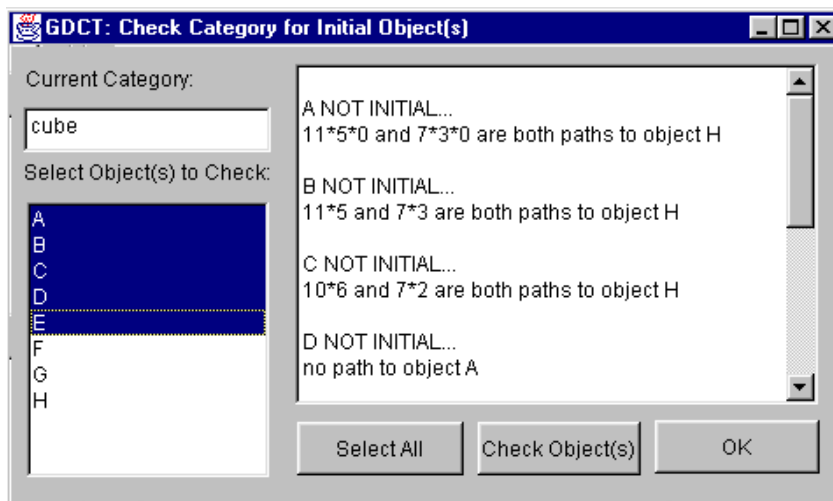
Make Dual Category

This tool will create the opposite category of the currently displayed category. Select Tools | Make Dual. A dialogue window opens prompting for the name of the dual. After the user provides the name the dual category is displayed.

WARNING: The opposite category is NOT SAVED automatically when it is created; use File | Save

Category if you wish to save the dual.

Initial Object ?

Select Tools | Initial Object?. This command tests objects of the current category (chosen by a dialogue) for initiality. For each selected object which is not initial a reason is given.

WARNING: This command will not operate correctly unless the category has a confluent set of relations. If in doubt use Make Confluent tool first.

Sum

Selecting Tools | Sum? opens a dialogue window allowing selection of a possible sum object from the current category from a drop-down and specification of (possibly composite) first and second injections, then testing the cospan for being a sum.

WARNING: The codomain of each injection must be the possible sum object. The test is only valid on a confluent category. (If in doubt use the Make Confluent tool).

NOTE: This feature has not yet been implemented.

Terminal Object

Select Tools | Terminal Object?. This command tests objects of the current category (chosen by a dialogue) for being terminal. For each selected object which is not terminal a reason is given.

WARNING: This command will not operate correctly unless the category has a confluent set of relations. If in doubt use Make Confluent Tool first.

Product

Selecting Tools | Product? opens a dialogue window allowing selection of a possible product object from the current category from a drop-down and specification of (possibly composite) first and second projections, then testing the span for being a product.

WARNING: The domain of each projection must be the possible product object. The test is only valid on a confluent category. (If in doubt use the Make Confluent tool).

NOTE: This feature has not yet been implemented.