cliques of transforms

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In[1]:= SetDirectory["l:"]; << goedel86.16a; << tools.m

:Package Title: goedel86.16a 2006 October 16 at 10:10 p.m.

It is now: 2006 Oct 17 at 13:13

Loading Simplification Rules

TOOLS.M Revised 2006 October 12

weightlimit = 40

summary

A formula for cliques of transforms is derived, and two applications are given to collections of cartesian squares.

cliques formula

Clearing the simplify flag reduces the execution time from 70 seconds to 10 seconds.

In[2]:= simplify = False;

This takes about 70 seconds when simplify is set versus 10 seconds when simplify is cleared.

In[3]:= cliques[composite[inverse[funpart[x]], y, funpart[x]]] // Normality

Out[3]= cliques[composite[inverse[funpart[x]], y, funpart[x]]] :=
    intersection[image[inverse[IMAGE[funpart[x]]], cliques[y]], P[domain[funpart[x]]]]

In[4]:= cliques[composite[inverse[funpart[x_]], y_, funpart[x_]]] :=
    intersection[image[inverse[IMAGE[funpart[x]]], cliques[y]], P[domain[funpart[x]]]]

applications

Theorem. The class of cartesian squares of a pairwise disjoint collection of sets is a pairwise disjoint collection of cartesian squares.
Theorem. The class of cartesian squares of a nest of sets is a nest of cartesian squares.