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Relation algebras from group actions. Preliminary report.

Suppose a group G acts on a set A. Let  $A_G$  be the unary algebra

$$\langle A, \{g \cdot (\,\cdot\,) : A \to A \,|\, g \in G\} \rangle$$

Then the collection  $Rel(A_G)$  of compatible relations on  $A_G$  is a proper relation algebra (endowed with the usual operations). We consider representable relation algebras which arise as algebras of compatible relations in this way. (Received January 27, 2009)