1070-03-262   **Marcia J. Groszek*** (`marcia.groszek@dartmouth.edu`), Dartmouth College, 6188 Kemeny Hall, Hanover, NH 03755-3551. *Ramsey Properties of Partial Orderings and Arithmetic Comprehension.*

A partial ordering $(\mathbb{P}, \leq_{\mathbb{P}})$ has the Ramsey property for pairs if, for every coloring of ordered pairs $p \leq_{\mathbb{P}} q$ in finitely many colors, there is a homogeneous subordering isomorphic to $(\mathbb{P}, \leq_{\mathbb{P}})$. In "Reverse mathematics, computability, and partitions of trees," (J. Symbolic Logic 74 (2009), no. 1, 201-215), Chubb, Hirst, and McNicholl ask, "Is there a Ramsey theorem on some class of partial orders where the theorem for pairs is equivalent to ACA_0 [arithmetic comprehension]?" We show there is a primitive recursive partial ordering $\mathbb{P}$ such that, over the base theory RCA_0, the statement "$\mathbb{P}$ has the Ramsey theory for pairs" is equivalent to ACA_0. (Received February 14, 2011)