In her eponymous first book on ethnomathematics, Marcia Ascher reminds us that shared mathematical ideas may be differently expressed and have different contexts in different cultures. The ancient pictographs and petroglyphs found painted on or carved in rocks include manifestations of geometric, numeric and algebraic ideas. We cannot know for certain the intentions of the prehistoric artists who created this rock art. Nevertheless, the figures they carved and the relationships between those figures are archaeological records of mathematical thinking. This paper examines some of the mathematical ideas embodied in the rock art of the American Southwest, the Great Plains, and the Pacific Northwest. (Received May 01, 2014)