There are two important aperiodic tiling methods. One is a projection method and the other is self-similar substitution method. Author applied projection and substitution method to several quasi-periodic tiling [1a] [1b] [1c] [2a] [2b] [2c]. Quantity of the information for research of aperiodic tiling except quasi-periodic tiling is not so large as that of quasi-periodic tiling. Author shows one of the substitution example. that is a "pentomino tile" which is made of five unit squares. First generation of a "pentomino tile" is composed of two original pentominos and chiral two original pentominos [3]. Author considered 3D solid body unit similar to exterior view of car-body as shown in figure, then succeeded in first generation tile using the body unit. In this study, author consider a relation between substitution and crystallographic rotation matrix and translation matrix and discuss general formulation of self-similar substitution. Caption of Figure: (left-hand) original generation, (center) First generation, (right-hand) Second generation


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