The main contribution of the present paper concerns the study of the *width* of quasi-orders P having finite antichains (FAC orders), which is defined as the rank of the tree of sequences of incomparable elements in P. The authors frame this study in a revision of the literature about two other ordinal invariants, namely the height and the maximal order type.

The width is characterized as the height of the set of antichains of P ordered by reverse inclusion, and it is shown that its calculation on FAC orders reduces to that on the class of well-quasi-orders (WQO). For the latter, formulas are obtained for lexicographic sums along an ordinal, and finite disjoint unions.

The authors provide some bounds for the width of the "Cartesian" product of *transferable* orders, i.e. those for which the width is not modified after the removal of finitely many principal ideals. (The authors use *direct product* for the ordinal product of posets.)

Given a WQO Q, the heights of the WQOs of finite sequences of Q (ordered by subsequence embedding, as in Higman's Theorem), multisets, and trees over Q (as in Kruskal's Theorem) are calculated in terms of that of Q; for the width, it is shown that it coincides with the maximal order type, if the width of Q is an indecomposable ordinal.

The paper ends by observing that the three ordinal invariants are the same for the Rado structure and $\omega \times \omega$, so they are not sufficient to characterize better-quasi-orders.