1056-05-473   **Sergey Kitaev*** (`Sergey@ru.is`). *Enumerating (2+2)-free posets by the number of minimal elements and other statistics.*

A poset is said to be (2+2)-free if it does not contain an induced subposet that is isomorphic to 2+2, the union of two disjoint 2-element chains. In a recent paper, Bousquet-Melou et al. found, using so called ascent sequences, the generating function for the number of (2+2)-free posets. We extend this result by finding a multi-variable generating function for (2+2)-free posets when four statistics are taken into account, one of which is the number of minimal elements in a poset. Also, we give another application of ascent sequences in proving that posets avoiding simultaneously 2+2 and 3+1 are counted by the Catalan numbers.

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