

This paper studies the question: What is the maximum integer kb, n such that every kb, n -colorable graph has a b -bend n -dimensional orthogonal box drawing?

We give an exact answer for the orthogonal line drawing in all dimensions and for the 3-dimensional rectangle visibility representation. We present an upper and lower bound for the 3-dimensional orthogonal drawing by rectangles and general boxes. Particularly, we improve the best known upper bound for the 3-dimensional orthogonal box drawing from 183 to 42 and the lower bound from 3 to 22.