Take the square lattice in the plane. The nodes of the lattice can be identified with pairs of integers (k, l) (Cartesian coordinates). Take two non-negative integers k, l and mark the points $(0, 0)$ and (k, l). A *lattice path* from $(0, 0)$ to (k, l) is a sequence of segments of the square lattice that leads from $(0, 0)$ to (k, l). A lattice path is called *monotone* if it runs only upwards and to the right. See an example on Figure **??**.

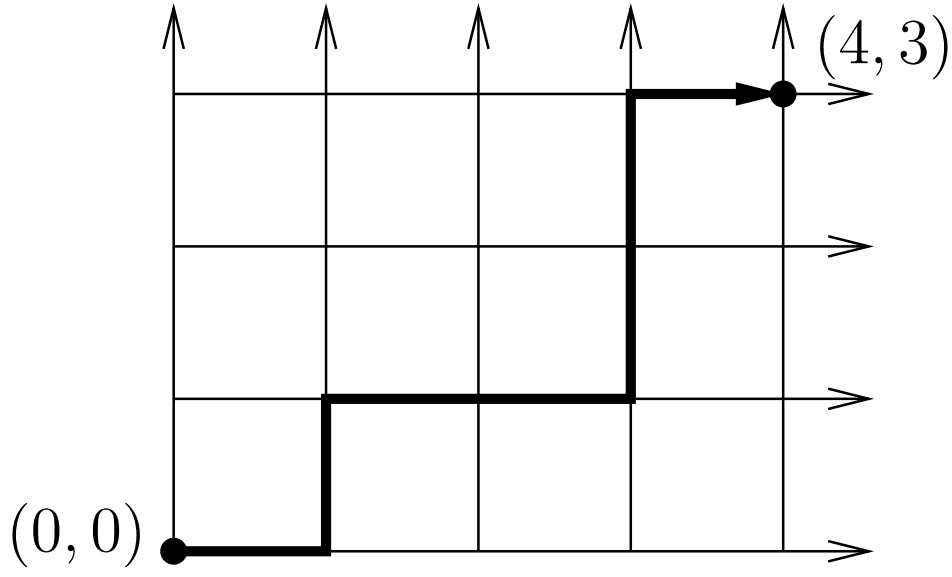

Figure 1: A monotone path.