



Problem of the Week

Problem E

Getting There

In the diagram, O is the origin and P is the point $(6, -4)$. Many paths exist that can get us from point O to point P . Two such paths are shown on the grid.

We define the *path length* between two points A and B as the **minimum** length along the grid lines from A to B .

The path length from O to P is 10. One such path is shown with solid line segments. A second path, shown with dashed lines, has length 20, which is greater than the minimum length path.

How many points with integer coordinates have a path length of 10 from O ?

