Advent of Code   [About] [Events] [Shop] [Settings] [Log Out]   jhillierdavis 16*
        /*2021*/   [Calendar] [AoC++] [Sponsors] [Leaderboard] [Stats]

--- Day 9: Smoke Basin ---

These caves seem to be lava tubes. Parts are even still volcanically
active; small hydrothermal vents release smoke into the caves that slowly
settles like rain.

If you can model how the smoke flows through the caves, you might be able
to avoid it and be that much safer. The submarine generates a heightmap of
the floor of the nearby caves for you (your puzzle input).

Smoke flows to the lowest point of the area it's in. For example, consider
the following heightmap:

```
2199943210
3987894921
9856789892
8767896789
9899965678
```

Each number corresponds to the height of a particular location, where 9 is
the highest and 0 is the lowest a location can be.

Your first goal is to find the low points - the locations that are lower
than any of its adjacent locations. Most locations have four adjacent
locations (up, down, left, and right); locations on the edge or corner of
the map have three or two adjacent locations, respectively. (Diagonal
locations do not count as adjacent.)

In the above example, there are four low points, all highlighted: two are
in the first row (a 1 and a 0), one is in the third row (a 5), and one is
in the bottom row (also a 5). All other locations on the heightmap have
some lower adjacent location, and so are not low points.

The risk level of a low point is 1 plus its height. In the above example,
the risk levels of the low points are 2, 1, 6, and 6. The sum of the risk
levels of all low points in the heightmap is therefore 15.

Find all of the low points on your heightmap. What is the sum of the risk
levels of all low points on your heightmap?

To begin, get your puzzle input.

Answer: [_____] [Submit]

You can also [Share] this puzzle.