When *"... and the Zinc Zygosphene"* was first made into a film the value of the Zinc Zygosphene was changed for *"artistic puposes"*. Other details, such as the value of the artefacts and the avoidance of adjacent selections, were left the same. The forthcoming graphic novel, with a nod towards both the book and film, has a Zinc Zygosphene whose value is the combined value of those sources.

Write a program that reads in two integers b then f (of up to 1,000,000 digits each) indicating the selected artefacts in the book and film respectively. In each, the ith digit *from the right* indicates the number of times (0 or 1) the ith artefact was selected in that source. The left-most digit of b and of f will be non-zero; you may assume any additional artefacts were not selected.

You should output a number whose left-most digit is 1 (using the format of the input) indicating the selected artefacts in the graphic novel, where no adjacent artefacts are selected and no artefact is selected more than once. The sum of the values of the selected items in the book combined with those in the film, should match that of those in the graphic novel.