Goal

Your website "The Bouquet of the Week" is a huge hit. Each week you sell only one type of bouquet consisting of flowers of 4 colors: purple, red, yellow and orange. This simplifies logistics a lot. To avoid that your customers get bored, you change the composition of the bouquet each week by varying the number of flowers of each color.

Your suppliers are rather unreliable and you receive daily quantities of each flowers that correspond more or less to what you ordered. In general, in the evening, there are flowers of some colors that have not been used for the day's bouquets that can be reused the next day. But beware, they fade after 48 hours so it is not possible to reuse them two days later.

You must determine the maximum number of bouquets achievable in a week based on daily arrivals.

Data

Input

Row 1: four integers **P**, **R**, **Y** and **O** between *1* and *50*, separated by a space, respectively corresponding to the number of flowers of the type purple, red, yellow and orange which will compose the bouquet of the week.
Rows 2 to 8: four integers **P**, **R**, **Y** and **O** between *1* and *1000*, separated by a space, respectively corresponding to the number of flowers of the type purple, red, yellow and orange delivered on the 7 consecutives days of the week.

Output

An integer corresponding to the maximum number of bouquets achievable during the week.

You can download sample input and output data files to work locally by clicking on the link at the bottom of the French version of the question.