2000   Wrap it up

You've been given the unfortunate task of planning text-book wrapping for your brothers and sisters (still in high-school). To save money, your parents bought sufficient plastic covering for any concievable number of text-books (certainly enough for all of the wrapping you will be asked to do).

The plastic comes in a huge roll (which is guaranteed to be long enough) 1,8m wide. Your parents have also insisted that you plan the book covering so that a stretch of the roll will be cut off *straight* (meaning that the cut line will be at 90 degrees to the edges). To save time, you will be wrapping each book with a rectangular piece of plastic — in particular, you will not be making any further cutouts to beautify the wrapping.

Given the n text-books to be covered, your task is to determine the mininum length k (in millimeters) of plastic to cut from the roll, so that each book is covered with a 4cm wrap-around (perhaps with some wasteage). Each of the n books has the usual shape for books (rectangular, and having both front and back covers) and is described using an ordered sequence of three integers (measured in millimeters): the height, width, and thickness. All except the thickness are guaranteed to be positive. (The thickness may, in fact, be zero in the case that you are asked to cover a leaflet.) You are guaranteed never to have a book with a dimension greater than 1720mm.

Input

Your input will contain of several datasets, each of them consisting on a sequence of lines: the first line contains n; each of the n subsequent lines (terminated by a new-line) contains three ordered integers (separated by a space) describing the height, width and thickness of one of the books to be covered.

Output

For each dataset, your output will consist of integer k on a line by itself.

Sample Input

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2
620 500 0
610 300 400
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Sample Output

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1080
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