Newspaper

You are a business owner and you want to advertise your business in The Alligator, the local Gainesville newspaper. The Alligator printers are old and outdated as they can only print articles in 2 font sizes: small and large. The printers at the newspaper office are also limited in such a way that they cannot print different font sizes on the same page. In other words, a page can only have text in small font or large font, not both. You can afford at most N pages in the newspaper. You want to maximize your chances that the reader will notice your ad, so you decide to try to maximize the number of pages written in large font. One can write S words per page if the small font is used and L words per page if the large font is used. If your article has W words and the newspaper company places a restriction that you can only start using a new page after having already filled all previous pages, what is the maximum number of full large font pages you can write while still fitting your entire article in the N pages you can afford?

Input

The input begins with a single positive integer, **1 <= T <= 100**, on a line by itself indicating the number of test cases to follow. Each test case is on a separate line and there are four numbers on the same line separated by a space, **1 <= N <= 100000, 2 <= S <= 20000, 1 <= L <= S-1, 1 <= W <= 2,000,000,000** indicating the number of pages you can afford in the newspaper, the number of words per page if small font is used, the number of words per page if the large font is used, and the number of words in your article respectively.

Output

For each test case, output the maximum number of pages in large font that you can write while still fitting your entire article in the N pages or -1 if there is no way you can fit your article in the number of pages you can afford.

Sample Input	**Sample Output**
5 25 1100 900 25000 25 1100 1000 25000 25 1100 1 25000 25 1100 0 25000 1 1100 900 25000	12 25 2 0 -1