

Problem FAMVACATION: Family Vacation

Uncle Dan loves his tiny chinchillas. They are so cute and furry, and they are always in movement. Dan's appartement is in fact a chinchilla paradise: They are allowed to play around outside of their cage all day, and to eat what they find - except computer wires.

Unlike other people Dan would never treat his chinchillas as a natural resource, though their fur is pretty popular with the ladies. Without natural enemies the cute scallywags reproduce exorbitantly.

At first Uncle Dan underestimated the effects of undamped reproduction, and soon all of his parlour was occupied by rocking and romping chinchillas. Uncle Dan understood that only strict birth control could stop the vast effects of overpopulation in his appartement. This step was truly not an easy one for Uncle Dan: He loved his chinchillas, but some had to be sterilized for the collective good.

This is not as easy as it might sound, since those tiny chinchillas look all the same, so some had to visit the doctor twice, while others remained unscathed in unknown chinchilla hideouts in Uncle Dan's appartement. Thus the reproduction of the chinchillas can not be stopped, it is just somewhat - slowed down.

But this is an interior affair of Uncle Dan and his animals that is not subject of this problem. The problem is that Uncle Dan wants to go to vacation. Since the chinchillas would never survive a two week absence of Dan, he has to take them with him.

The obvious possibility to transport the chinchillas is to hire a train conductor and its train, to transport Dan's luggage, Dan himself, and Dan's chinchillas to their destination.

Unfortunately, the few train conductors that exist have a very tight time schedule, and every wagon must be paid separately. Dan economizes with his money, and plans only to pay the wagons for his chinchillas, and to place himself in the last wagon to his chinchillas, where he needs at least half of the wagon for his luggage, the chinchilla fodder and himself.

So he negotiates with different train conductors about the conditions of transportation, where the conductor offers a departure date N days in the future. Dan has a very good estimation formula to know how many wagons his chinchillas will need.

A wagon is always filled completely before the next wagon is filled. The only thing he wants to know is whether the last of the wagons that are needed is still half empty.

Input

The first line of the input is a number $C \leq 10000$, the number of test cases. Afterwards follow C lines, where each line specifies a single test case.

One test case consists of eight integer numbers N , V , c_0 , c_1 , c_2 , p_0 , p_1 and p_2 . Here N (with $1 \leq N \leq 100000$) describes the number of weeks, until the vacation starts. V (with $1 \leq V \leq 10000$) is the volume (in terms of chinchillas) of a single train wagon.

c_0 is the number of chinchillas at the beginning of the current week, c_1 is the number of chinchillas at the beginning of the last week, and c_2 is the number of chinchillas two weeks ago.

This is important, since they might still be in their hideout and produce offspring. The rate of reproduction in the current, last week and the week before last week is given by p_0 , p_1 and p_2 , such that the population of the next week is

$$c_{new} = c_0 \cdot p_0 + c_1 \cdot p_1 + c_2 \cdot p_2$$

The rate of reproduction is assumed to be constant until the vacation starts, so it is predictable how many chinchillas exist in two weeks, three weeks and so on. You can assume that c_i , p_i are always smaller than 1000.

Output

Assume that Uncle Dan orders exactly so many wagons, that his chinchillas fit into the train. Since Uncle Dan himself also wants to go by this train, print for every test case either a single line containing YES if at least half of one wagon is still free for Dan, or NO otherwise.

Sample Input 1

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2
2 10 2 2 2 2 1 0
4 10 3 3 3 3 3 3
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Sample Output 1

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YES
NO
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