

Problem C

COMPUTER CORD

File name: C.{java,c,cpp}

One day Alex and Sonny were at school on their laptops practicing for the 2009 Rocky Mountain Regionals, but Alex forgot his laptop power cord. Luckily for Alex, Sonny's laptop was similar and he brought his power cord, so they took turns charging with one cord.

Alex posed the following questions: "If we charge optimally, will both our laptops run out of batteries? If not, what is longest amount of time both our laptops stay powered?"

	INITIAL CHARGE	CHARGING RATE	CONSUMPTION RATE
ALEX	A units	B units per minute	C units per minute
SONNY	D units	E units per minute	F units per minute

A description of Alex's and Sonny's batteries.

A laptop runs out of batteries when it reaches 0 units of charge, however is still powered with an infinitesimally small value greater than 0. A battery cannot have more than 100 units of charge. For simplicity assume it takes no time to change the cord between laptops.

Program Input

The first line of the input contains an integer T ($1 \leq T \leq 100$), the number of test cases. Each test case is a line of integers " $A B C D E F$ " (see table). All values will be between 1 and 100.

Program Output

If there is a way to charge so that both batteries will not run out, output "Sonny and Alex are safe". Otherwise, output the maximum time in minutes both laptops do not run out of batteries rounded to the nearest minute.

Sample Input & Output

INPUT	OUTPUT
1 10 10 10 20 10 20	7