



Brain Power



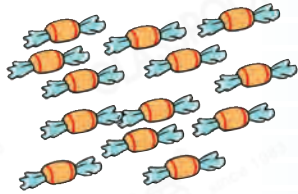
Final victory

Anna, let's play a game with candy. Candies are the prize for the winner.



Good. How to play?

Preparation



Please prepare 13 candies or 13 other props.

Rules of the game

Is this game limited to 2 people?



Yes. Two people take turns to take the candy. Each one can take away 1 to 3 candies once at a time. No one is allowed to take zero or more than 3. The one who takes away the last candy will be the loser.

Let's start playing.





Oh! I win again!



Why do you win every time? Are you cheating?



I am not cheating. Indeed there some techniques in this game. Let me explain to you then!

Winning strategy

A and B play the game. The winning strategy of A is: Let B take candy first and the total quantity taken by A and B each round must be 4. A must win in this way.

Circumstances			
First time	B takes away	3 pieces	} Total 4 pieces
	A takes away	1 piece	
9 candies left			
Second time	B takes away	2 pieces	} Total 4 pieces
	A takes away	2 pieces	
5 candies left			
Third time	B takes away	1 piece	} Total 4 pieces
	A takes away	3 pieces	
1 candy left → B's turn to take away			

According to this technique, after each of us takes 3 times, we take away a total of 12 candies. The last candy must be taken by you. Thus you must lose every time.



I get it. I can use this strategy to play with friends next time.