

Nim

In this game there are two piles of tokens. Decide how many are in each.

Play the game with a partner. Can you find a strategy for one player or the other to win?

Which of these statements do you think is true?

- The first player will always win.
- The second player will always win.
- It is just a matter of luck and anyone can win.

Can you justify your choice?

Complete the following table.

Pile 1	Pile 2	Who wins?	Why?
3	4		
3	5		
3	6		
3	7		
4	4		
4	5		
6	6		
12	243		

Given s and t tokens, when will Robyn win and when will Kuparr win? Can you explain why?

Investigate what happens with three piles.

For what numbers of stones will Robyn win? How will she win?

For what numbers of stones will Kuparr win? How will he win?
