



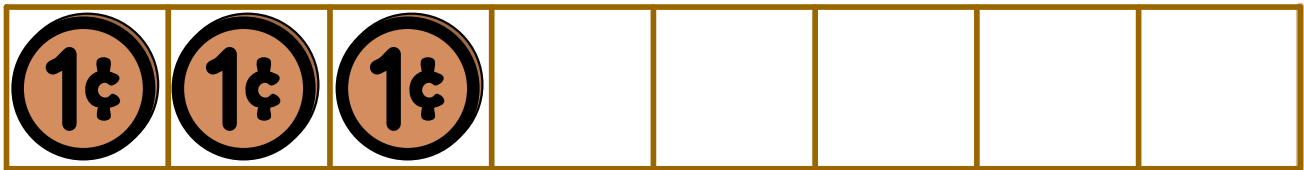
## Problem of the Week

### Problem D

### A Good Use for Pennies

In Canada, we stopped using pennies for transactions in 2012. So we will repurpose three of the obsolete coins in a two-player game.

Alice and Beth are playing a game with three pennies on a 1 unit by 8 unit strip of paper divided up into eight squares. To start the game, the pennies are placed in the three leftmost positions, as shown.



The rules of the game are as follows:

- (i) On a player's turn, the player must move a penny any number of squares to the right.
- (ii) The penny may not pass over any other penny or land on a square that is occupied by another penny.
- (iii) If it is a player's turn and there is no legal move possible, then that player loses the game.

It is Alice's turn to go first. Alice can always win. Describe Alice's first move and her winning strategy.

