

Flipping Out

You have seven two-colored counters. Starting red side up—these counters have to be turned over so that all counters become yellow. However, you can only turn over exactly three at a time. What is the minimum number of moves required to do this?

Try to determine the minimum number of moves required to turn over other numbers of counters (greater than seven), still only turning over exactly three at a time.

Formulate a generalization that will determine the minimum number of moves required to turn over any number of counters greater than or equal to seven while maintaining the requirement that exactly three counters are turned over at a time.

When you have solved this problem, go to Room 2051 to present your solution to the Master Teacher. Be prepared to demonstrate as needed to support your explanation.