

# Reversing White and Black

## Problem-of-the-Week









### The Problem

A game board has 20 squares arranged in five rows of four. White markers are placed on squares 1, 6, 11, and 16; black markers on squares 5, 10, 15, and 20. In each move, you can slide a marker along a diagonal to any free square. Describe a way of going from the starting position to the ending position in the fewest number of moves.

*Game Board*

1	6	11	16
2	7	12	17
3	8	13	18
4	9	14	19
5	10	15	20

*Starting Position*

			
2	7	12	17
3	8	13	18
4	9	14	19
			

*Ending Position*

			
2	7	12	17
3	8	13	18
4	9	14	19
			

### Strategies and Hints

1. Can a marker that starts on an even number ever land on an odd number?
2. First solve just part of the puzzle by working with only those markers on the odd-numbered squares.
3. The diagram is a hint to help you solve the puzzle. What is shown in the diagram?

