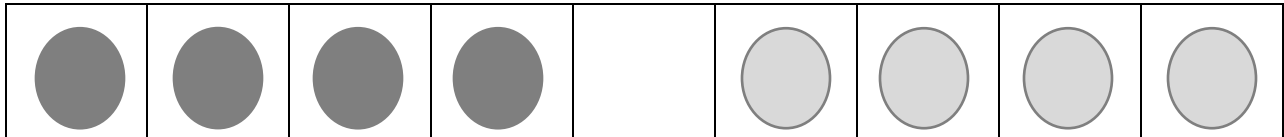# The Shuttle Puzzle

Arrange four each of two kinds of markers (for example, four red tiles and four blue tiles) on the opposite ends of the playing board.

The object of the puzzle is to move the dark colored chips to the light colored chip position and vice versa using only two types of moves: slides and jumps.

Slide: A move of one square to the right for dark grey or one square to the left for light grey. You must end up in an empty space.

Jump: A move in which dark grey moves to the right by jumping over one light grey and lands in an empty space or light grey moves to the left by jumping over one dark grey and lands in an empty space.

Restrictions:

1) You cannot move backward; for example, light grey cannot move right and dark grey cannot move left.
2) You must always land in an empty space.

Set up a playing board and markers and work on this puzzle. Record your sequence of moves. How many total moves does it take to solve the problem? What is the fewest number of moves needed?

If you expanded the size of the playing board and the number of chips, can you determine the minimum number of moves needed?

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