Use the Python code to display the determinant, transpose, and inverse of a 2x2 matrix. Ask the user to input four numbers of the matrix separated by a space. Each number will be placed in the following order: northwest, northeast, southwest, and southeast. Do not use any pre-made package or function. Display no more than three decimal places. If the input is not provided correctly or the solution does not exist, display prompts accordingly to collect valid input and generate correct output.

Example:

Enter four numbers separated by a space: 3 2 1 8

Output:

Your matrix: [[3 2]
               [1 8]]

Determinant: 22

Transpose: [[3 1]
               [2 8]]

Inverse: [[-0.364 -0.0909]
               [-0.0455 0.136]]