FUNCTION shuffle, A, B
sa = Size(A, /dim)
sb = Size(B, /dim)
IF max(sa ne sb) GT 0 THEN Message, 'Arrays must have the same dimensions'
IF n_elements(sa) NE 2 THEN Message, 'Arrays must be 2D'
nc = sa[0] ; Number of columns. We don't care about the number of rows.
even = Indgen(nc)*2
odd = even + 1
; Constructs an array with the right dimensions and type.
; We will overwrite the actual contents, so they don't matter.
C = [A, B]

; Now fill in the even columns
C[even, *] = A

; Fill in the odd columns
C[odd, *] = B

Return, C
END