	x_1	x_2	Fitness Evaluation	Calculation Note / Comment
Starting Solution, S_0	2	2	**0.2432**	$=x_1*\cos(x_1)*\sin(x_2) + 0.5*x_2$

	x_1	x_2	Fitness Evaluation	
Current Solution	2	2	**0.2432**	$=x_1*\cos(x_1)*\sin(x_2) + 0.5*x_2$
Done?	FALSE			

Iteration 1				
Best Neighbor (current)	2	2	0.2432	current solution from past iteration

Neighbors of (2, 2)	x_1	x_2	**Fitness Evaluation**	
Neighbor 1 (x1 + 1, x2)	3	2	-1.7006	$=x_1*\cos(x_1)*\sin(x_2) + 0.5*x_2$
Neighbor 2 (x1 - 1, x2)	1	2	1.4913	...
Neighbor 3 (x1, x2 + 1)	2	3	1.3825	...
Neighbor 4 (x1, x2 - 1)	2	1	-0.2004	...

(New) Best Neighbor	**3**	**2**	**-1.7006**	=min(neighbors, best_neighbor)
is Best Neighbor Same as Old?	FALSE			
Done?	FALSE			done if same

	x_1	x_2	Fitness Evaluation	
Current Solution	3	2	**-1.7006**	$=x_1*\cos(x_1)*\sin(x_2) + 0.5*x_2$

Iteration 2				
Best Neighbor (current)	3	2	-1.7006	current solution from past iteration

Neighbors of (3, 2)	x_1	x_2	**Fitness Evaluation**	
Neighbor 1 (x1 + 1, x2)	4	2	-1.3774	$=x_1*\cos(x_1)*\sin(x_2) + 0.5*x_2$
Neighbor 2 (x1 - 1, x2)	2	2	0.2432	...
Neighbor 3 (x1, x2 + 1)	3	3	1.0809	...
Neighbor 4 (x1, x2 - 1)	3	1	-1.9991	...

(New) Best Neighbor	**3**	**1**	**-1.9991**	=min(neighbors, best_neighbor)
is Best Neighbor Same as Old?	FALSE			
Done?	FALSE			done if same

	x_1	x_2	Fitness Evaluation	
Current Solution	3	1	**-1.9991**	$=x_1*\cos(x_1)*\sin(x_2) + 0.5*x_2$

Iteration 3				
Best Neighbor (current)	3	1	-1.9991	current solution from past iteration

Neighbors of (3, 1)	x_1	x_2	**Fitness Evaluation**	
Neighbor 1 (x1 + 1, x2)	4	1	-1.7001	$=x_1*\cos(x_1)*\sin(x_2) + 0.5*x_2$
Neighbor 2 (x1 - 1, x2)	2	1	-0.2004	...
Neighbor 3 (x1, x2 + 1)	3	2	-1.7006	...
Neighbor 4 (x1, x2 - 1)	3	0	0.0000	...

(New) Best Neighbor	**3**	**1**	**-1.9991**	=min(neighbors, best_neighbor)
is Best Neighbor Same as Old?	TRUE			
Done?	TRUE			done if same: end if end while