

```

In[1]:= f[x_] := If[EvenQ[x], x / 2, 3 x + 1];
collatz[n_] := (number = 0;
  For[i = n, i > 1, i = f[i], number++];
  Return[number])
For[j = 1, j ≤ 9, j++, For[k = 1, k ≤ 2, k++, g[j, k] = If[k == 1, j, collatz[j]]]];
mat1 = Array[g, {9, 2}];
mat2 = {{24, collatz[24]}, {63, collatz[63]}, {77, collatz[77]},
  {169, collatz[169]}, {543, collatz[543]}, {808, collatz[808]}};
Grid[Join[mat1, mat2]];
ReplacePart[Grid[Join[mat1, mat2], Frame → All],
  1 → Prepend[First[Grid[Join[mat1, mat2], Frame → All]],
    {"Starting Value, n", "Number of steps"}]]

```

Out[7]=

Starting Value, n	Number of steps
1	0
2	1
3	7
4	2
5	5
6	8
7	16
8	3
9	19
24	10
63	107
77	22
169	49
543	136
808	28