

The function, `nvalue[t]`, computes a random positive odd integer,  $21 \leq n < 100,000$  (initially), for a small index,  $1 \leq t \leq 10$  (number of trials for a Collatz sequence of odd integers to converge to one from the computed  $n$ ).

In[11]:=

```
nvalue[t_] := (  
  tt = t;  
  icnt = 0;  
  n = RandomInteger[{21, 100 000}];  
  If[EvenQ[n], n = n + 1];  
  While[icnt  $\neq$  tt,  
  While[n  $\neq$  1,  
  If[icnt == 0, nstart = n];  
  n = 3 n + 1;  
  While[EvenQ[n], n = n / 2];  
  icnt = icnt + 1;  
  If[icnt > tt, n = nstart + 2 * RandomInteger[{1, 10}]] * 2;  
  If[icnt > tt, icnt = 0];  
  Return[{tt, nstart}];
```

In[2]:= **nvalue[1]**

Out[2]= {1, 21 845}

In[3]:= **nvalue[2]**

Out[3]= {2, 233 013}

In[4]:= **nvalue[3]**

Out[4]= {3, 77 589}

In[5]:= **nvalue[4]**

Out[5]= {4, 6445}

In[28]:= **nvalue[5]**

Out[28]= {5, 68 693}

In[17]:= **nvalue[6]**

Out[17]= {6, 40 021}

In[34]:= **nvalue[7]**

Out[34]= {7, 57 139}

In[9]:= **nvalue[8]**

Out[9]= {8, 37 685}

In[14]:= **nvalue[9]**

Out[14]= {9, 23 693}

In[16]:= **nvalue[10]**

Out[16]= {10, 60 225}

In[68]:= **nvalue[41]**

Out[60]= {41, 58 131}

**nvalue[22]**

Out[32]= {22, 57 457}

In[24]:= **nvalue[17]**

Out[24]= {17, 30 461}