In[7]:=
```
s[0] = 0; s[1] = 1; s[n_?EvenQ] := s[n] = s[n/2];
s[n_?OddQ] := s[n] = s[(n+1)/2] + s[(n-1)/2]
```

In[9]:=
```
TableForm[Table[{n, s[n], n+32, s[n+32], n+64, s[n+64],
  n+96, s[n+96], n+128, s[n+128]}, {n, 1, 32}]]
```

Out[9]//TableForm=

1	1	33	6	65	7	97	11	129	8
2	1	34	5	66	6	98	9	130	7
3	2	35	9	67	11	99	16	131	13
4	1	36	4	68	5	100	7	132	6
5	3	37	11	69	14	101	19	133	17
6	2	38	7	70	9	102	12	134	11
7	3	39	10	71	13	103	17	135	16
8	1	40	3	72	4	104	5	136	5
9	4	41	11	73	15	105	18	137	19
10	3	42	8	74	11	106	13	138	14
11	5	43	13	75	18	107	21	139	23
12	2	44	5	76	7	108	8	140	9
13	5	45	12	77	17	109	19	141	22
14	3	46	7	78	10	110	11	142	13
15	4	47	9	79	13	111	14	143	17
16	1	48	2	80	3	112	3	144	4
17	5	49	9	81	14	113	13	145	19
18	4	50	7	82	11	114	10	146	15
19	7	51	12	83	19	115	17	147	26
20	3	52	5	84	8	116	7	148	11
21	8	53	13	85	21	117	18	149	29
22	5	54	8	86	13	118	11	150	18
23	7	55	11	87	18	119	15	151	25
24	2	56	3	88	5	120	4	152	7
25	7	57	10	89	17	121	13	153	24
26	5	58	7	90	12	122	9	154	17
27	8	59	11	91	19	123	14	155	27
28	3	60	4	92	7	124	5	156	10
29	7	61	9	93	16	125	11	157	23
30	4	62	5	94	9	126	6	158	13
31	5	63	6	95	11	127	7	159	16
32	1	64	1	96	2	128	1	160	3

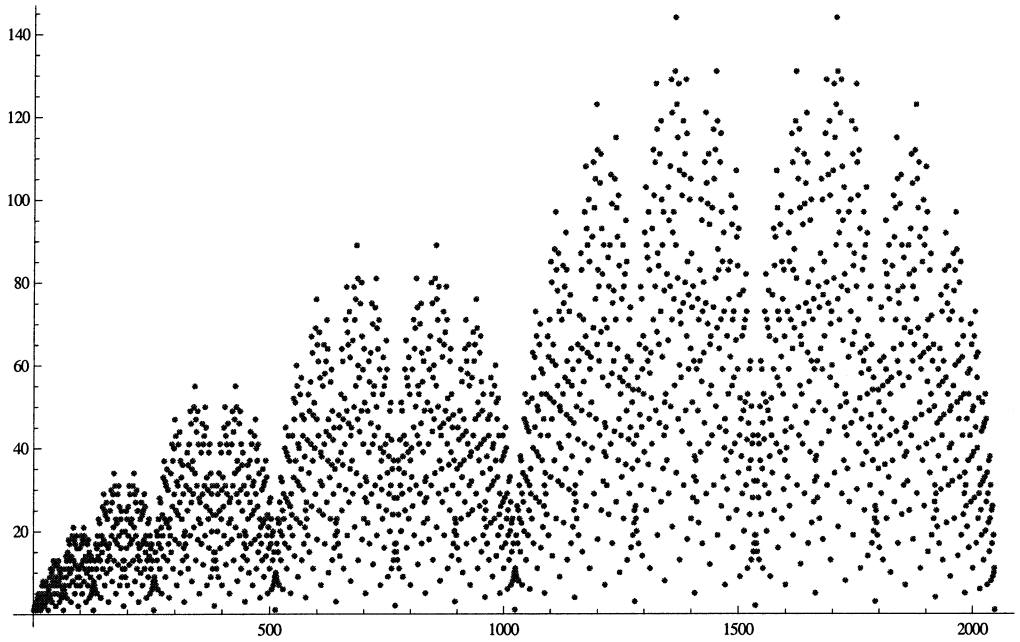
In[10]:=
```
TableForm[Table[
  {n + 160, s[n + 160], n + 192, s[n + 192], n + 224, s[n + 224],
   n + 256, s[n + 256], n + 288, s[n + 288]}, {n, 1, 32}]]
```

Out[10]//TableForm=

161	17	193	13	225	16	257	9	289	23
162	14	194	11	226	13	258	8	290	19
163	25	195	20	227	23	259	15	291	34
164	11	196	9	228	10	260	7	292	15
165	30	197	25	229	27	261	20	293	41
166	19	198	16	230	17	262	13	294	26
167	27	199	23	231	24	263	19	295	37
168	8	200	7	232	7	264	6	296	11
169	29	201	26	233	25	265	23	297	40
170	21	202	19	234	18	266	17	298	29
171	34	203	31	235	29	267	28	299	47
172	13	204	12	236	11	268	11	300	18
173	31	205	29	237	26	269	27	301	43
174	18	206	17	238	15	270	16	302	25
175	23	207	22	239	19	271	21	303	32
176	5	208	5	240	4	272	5	304	7
177	22	209	23	241	17	273	24	305	31
178	17	210	18	242	13	274	19	306	24
179	29	211	31	243	22	275	33	307	41
180	12	212	13	244	9	276	14	308	17
181	31	213	34	245	23	277	37	309	44
182	19	214	21	246	14	278	23	310	27
183	26	215	29	247	19	279	32	311	37
184	7	216	8	248	5	280	9	312	10
185	23	217	27	249	16	281	31	313	33
186	16	218	19	250	11	282	22	314	23
187	25	219	30	251	17	283	35	315	36
188	9	220	11	252	6	284	13	316	13
189	20	221	25	253	13	285	30	317	29
190	11	222	14	254	7	286	17	318	16
191	13	223	17	255	8	287	21	319	19
192	2	224	3	256	1	288	4	320	3

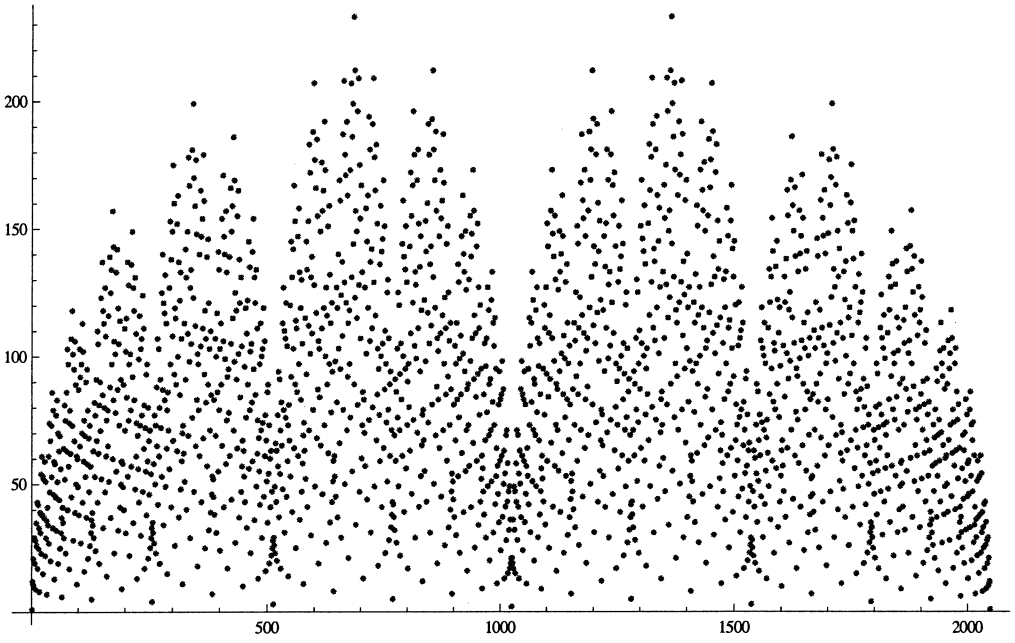
In[11]:=
```
ListPlot[Table[s[n], {n, 1, 2048}]]
```

Out[11]=



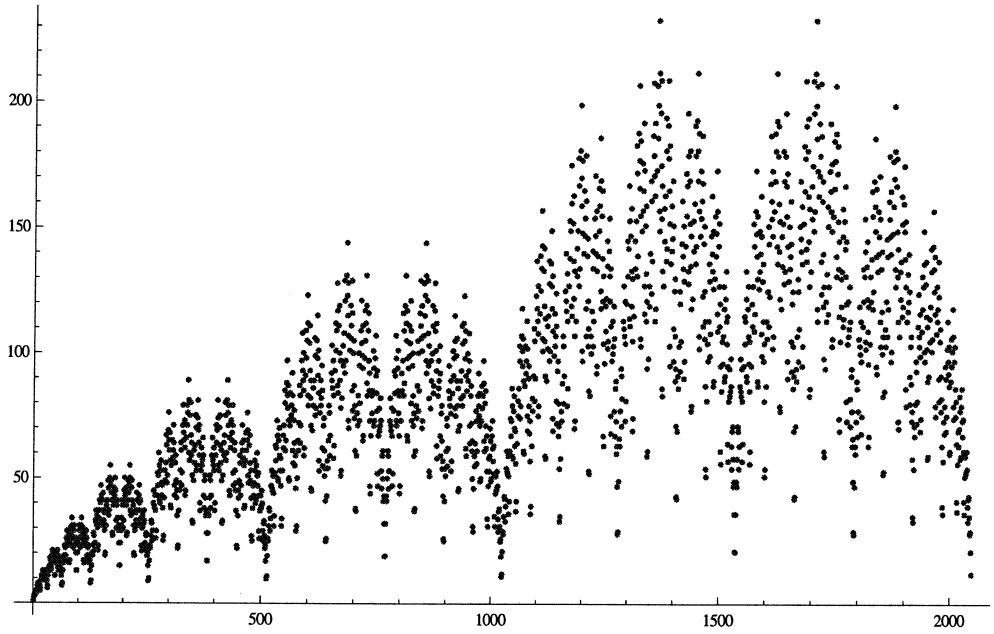
In[12]:=
```
ListPlot[Table[s[n], {n, 2048, 4096}]]
```

Out[12]=



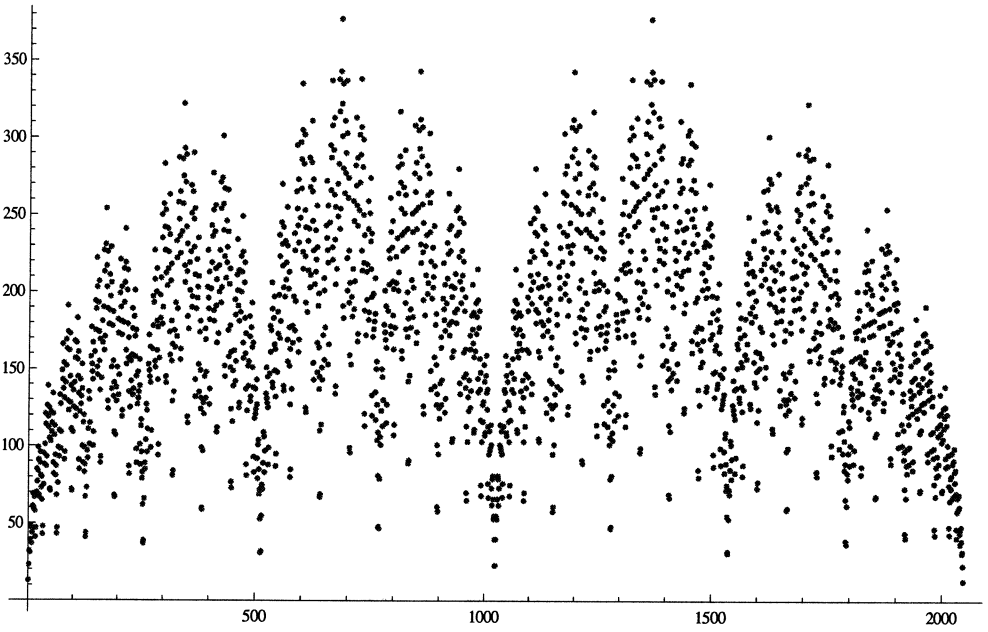
In[13]:=
```
ListPlot[Table[s[2 n + 1], {n, 0, 2047}]]
```

Out[13]=



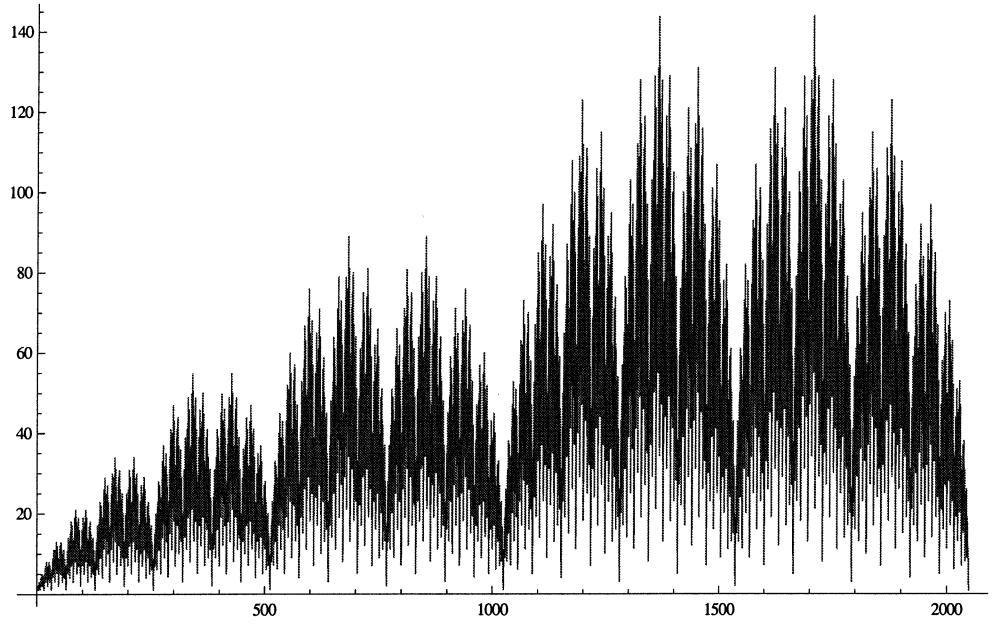
In[14]:=
```
ListPlot[Table[s[2 n + 1], {n, 2048, 4095}]]
```

Out[14]=



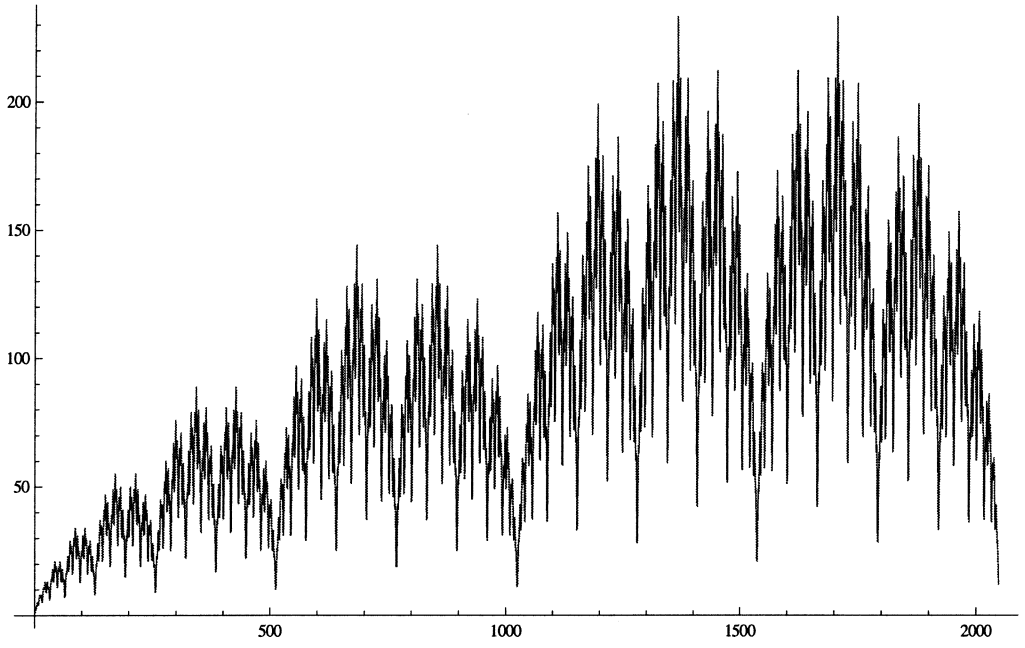
In[15]:=
```
ListPlot[Table[s[n], {n, 1, 2048}], Joined → True]
```

Out[15]=



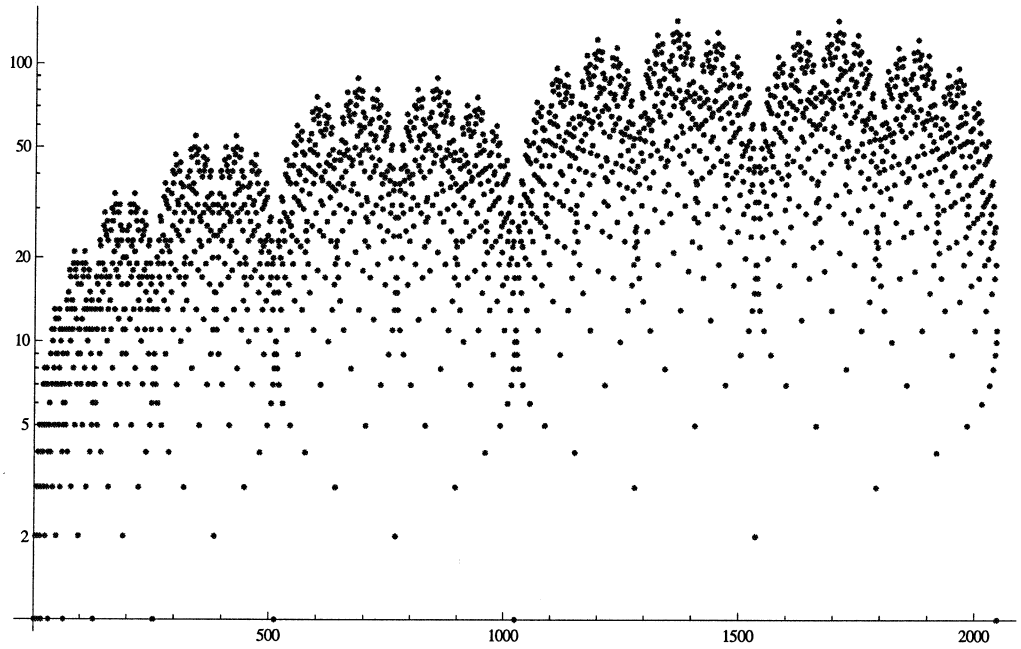
In[16]:=
```
ListPlot[Table[s[2 n + 1], {n, 0, 2047}], Joined → True]
```

Out[16]=



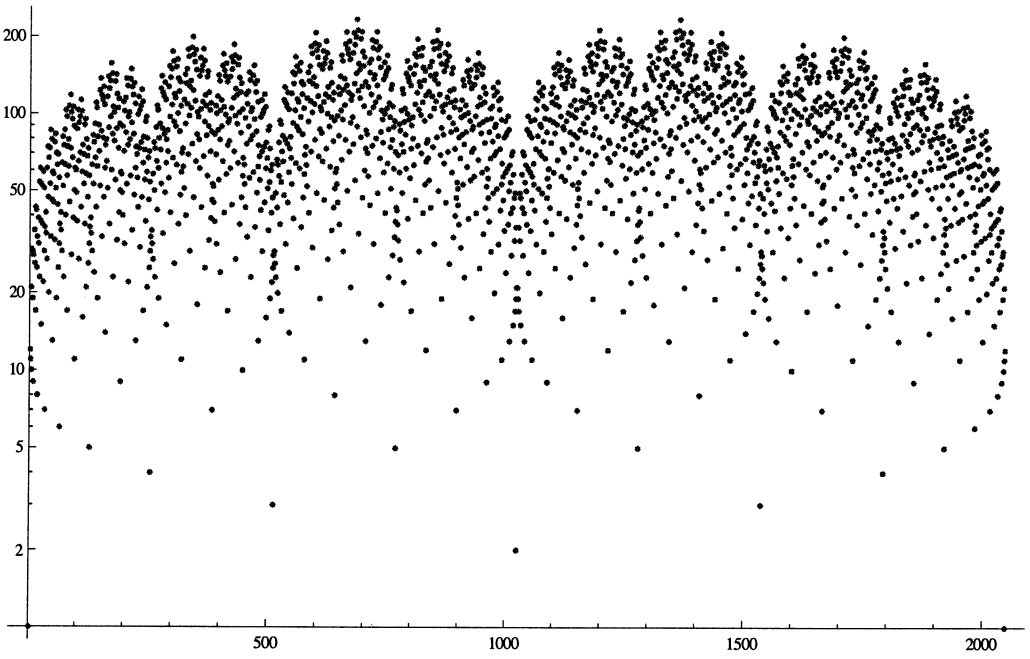
In[17]:=
```
ListLogPlot[Table[s[n], {n, 1, 2048}]]
```

Out[17]=



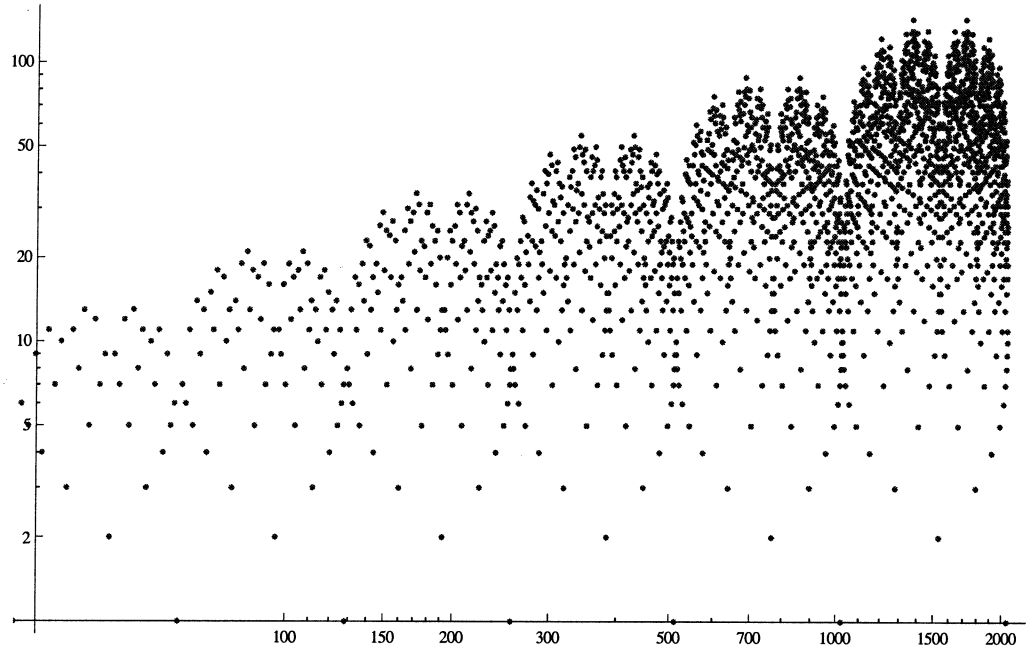
In[18]:=
```
ListLogPlot[Table[s[n], {n, 2048, 4096}]]
```

Out[18]=



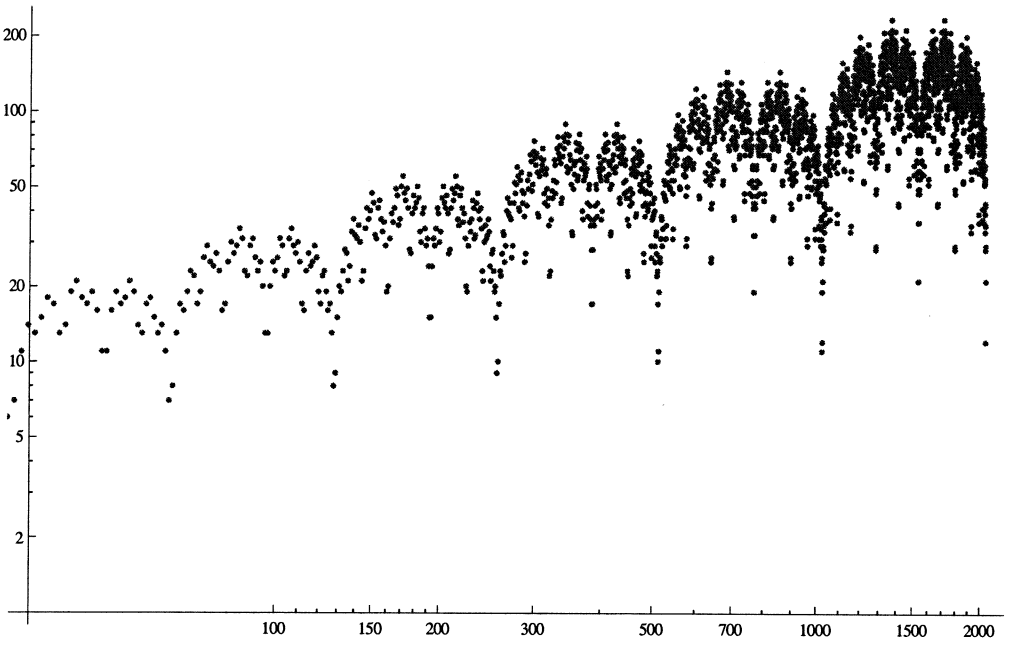
In[19]:= **ListLogLogPlot[Table[s[n], {n, 1, 2048}]]**

Out[19]=



In[20]:= **ListLogLogPlot[Table[s[2 n + 1], {n, 0, 2047}]]**

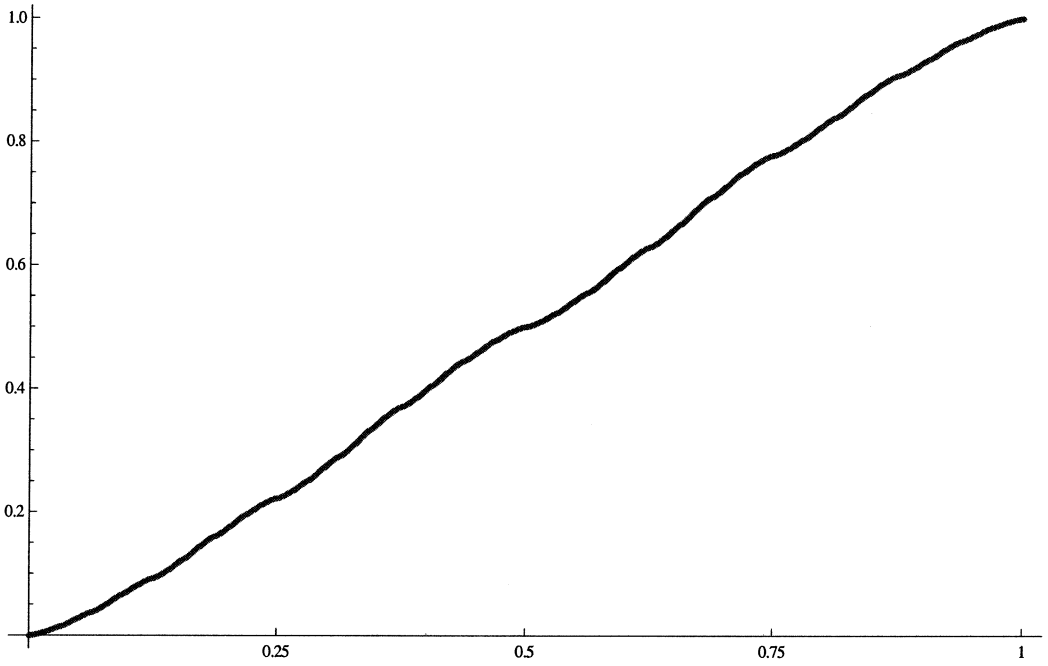
Out[20]=



Here are two pictures which describe the behavior of the summatory function between 2^{14} and $2^{14}(1+x)$. The second

picture shows the difference from a uniform distribution. The formulas used to derive these pictures are omitted, but will be discussed later.

Out[25]=



Out[26]=