**CODE**

import "io"

let start() be

{

let input, remainder, length = 1;

while true do

{

out("Please enter an integer greater than 0 or type \"0\" to close the program\n");

input := inno(); //reads input as an integer

test input > 0 then

{

length := 1;

while input <> 1 do

{

length +:= 1;

remainder := input rem 2;

out("%d, ", input);

test remainder = 0 then

{

input /:= 2;

}

else

{

input := input \* 3 + 1;

}

}

test input = 1 then

{

out("1 length: %d\n", length);

}

else

{

out("%d, ", input);

}

}

else test input = 0 then

{

out("Exiting Program\n");

finish;

}

else

{

}

}

finish;

}

**OUTPUT FILE**

Please enter an integer greater than 0 or type "0" to close the program

196

196, 98, 49, 148, 74, 37, 112, 56, 28, 14, 7, 22, 11, 34, 17, 52, 26, 13, 40, 20, 10, 5, 16, 8, 4, 2, 1 length: 27

Please enter an integer greater than 0 or type "0" to close the program

1

1 length: 1

Please enter an integer greater than 0 or type "0" to close the program

2

2, 1 length: 2

Please enter an integer greater than 0 or type "0" to close the program

3

3, 10, 5, 16, 8, 4, 2, 1 length: 8

Please enter an integer greater than 0 or type "0" to close the program

4

4, 2, 1 length: 3

Please enter an integer greater than 0 or type "0" to close the program

5

5, 16, 8, 4, 2, 1 length: 6

Please enter an integer greater than 0 or type "0" to close the program

6

6, 3, 10, 5, 16, 8, 4, 2, 1 length: 9

Please enter an integer greater than 0 or type "0" to close the program

7

7, 22, 11, 34, 17, 52, 26, 13, 40, 20, 10, 5, 16, 8, 4, 2, 1 length: 17

Please enter an integer greater than 0 or type "0" to close the program

8

8, 4, 2, 1 length: 4

Please enter an integer greater than 0 or type "0" to close the program

9

9, 28, 14, 7, 22, 11, 34, 17, 52, 26, 13, 40, 20, 10, 5, 16, 8, 4, 2, 1 length: 20

Please enter an integer greater than 0 or type "0" to close the program

10

10, 5, 16, 8, 4, 2, 1 length: 7

Please enter an integer greater than 0 or type "0" to close the program

123456789

123456789, 370370368, 185185184, 92592592, 46296296, 23148148, 11574074, 5787037, 17361112, 8680556, 4340278, 2170139, 6510418, 3255209, 9765628, 4882814, 2441407, 7324222, 3662111, 10986334, 5493167, 16479502, 8239751, 24719254, 12359627, 37078882, 18539441, 55618324, 27809162, 13904581, 41713744, 20856872, 10428436, 5214218, 2607109, 7821328, 3910664, 1955332, 977666, 488833, 1466500, 733250, 366625, 1099876, 549938, 274969, 824908, 412454, 206227, 618682, 309341, 928024, 464012, 232006, 116003, 348010, 174005, 522016, 261008, 130504, 65252, 32626, 16313, 48940, 24470, 12235, 36706, 18353, 55060, 27530, 13765, 41296, 20648, 10324, 5162, 2581, 7744, 3872, 1936, 968, 484, 242, 121, 364, 182, 91, 274, 137, 412, 206, 103, 310, 155, 466, 233, 700, 350, 175, 526, 263, 790, 395, 1186, 593, 1780, 890, 445, 1336, 668, 334, 167, 502, 251, 754, 377, 1132, 566, 283, 850, 425, 1276, 638, 319, 958, 479, 1438, 719, 2158, 1079, 3238, 1619, 4858, 2429, 7288, 3644, 1822, 911, 2734, 1367, 4102, 2051, 6154, 3077, 9232, 4616, 2308, 1154, 577, 1732, 866, 433, 1300, 650, 325, 976, 488, 244, 122, 61, 184, 92, 46, 23, 70, 35, 106, 53, 160, 80, 40, 20, 10, 5, 16, 8, 4, 2, 1 length: 178

Please enter an integer greater than 0 or type "0" to close the program

awleiufhawleifuh

eiwfjowaiej

.

1.2.3

1 length: 1

Please enter an integer greater than 0 or type "0" to close the program

2, 1 length: 2

Please enter an integer greater than 0 or type "0" to close the program

3, 10, 5, 16, 8, 4, 2, 1 length: 8

Please enter an integer greater than 0 or type "0" to close the program

1.2.3.4.5.6.7.8.9

1 length: 1

Please enter an integer greater than 0 or type "0" to close the program

2, 1 length: 2

Please enter an integer greater than 0 or type "0" to close the program

3, 10, 5, 16, 8, 4, 2, 1 length: 8

Please enter an integer greater than 0 or type "0" to close the program

4, 2, 1 length: 3

Please enter an integer greater than 0 or type "0" to close the program

5, 16, 8, 4, 2, 1 length: 6

Please enter an integer greater than 0 or type "0" to close the program

6, 3, 10, 5, 16, 8, 4, 2, 1 length: 9

Please enter an integer greater than 0 or type "0" to close the program

7, 22, 11, 34, 17, 52, 26, 13, 40, 20, 10, 5, 16, 8, 4, 2, 1 length: 17

Please enter an integer greater than 0 or type "0" to close the program

8, 4, 2, 1 length: 4

Please enter an integer greater than 0 or type "0" to close the program

9, 28, 14, 7, 22, 11, 34, 17, 52, 26, 13, 40, 20, 10, 5, 16, 8, 4, 2, 1 length: 20

Please enter an integer greater than 0 or type "0" to close the program

0

Exiting Program