

Students:

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13.37 Collatz (Loops - Medium)

Objective:

Write a Python program that takes a positive integer, *test_int*, and prints the Collatz sequence starting at x.

Description:

A Collatz sequence is obtained by repeatedly applying this rule to the previous number x in the sequence:

$x = x/2$ if x is even

$3x+1$ if x is odd.

Stop when the sequence gets to number 1.

Sample Inputs/Outputs:

Example 1: `test_int = 10`

Expected Output: `[10, 5, 16, 8, 4, 2, 1]`

Example 2: `test_int = 24`

Expected Output: `[24, 12, 6, 3, 10, 5, 16, 8, 4, 2, 1]`

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LAB
ACTIVITY

13.37.1: Collatz (Loops - Medium)

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main.py

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```
1 test_int = int(input())
2
3 #Using the value in test_int, write your code below
4
```

Develop mode

Submit mode

Run your program as often as you'd like, before submitting for grading. Below, type any needed input values in the first box, then click **Run program** and observe the program's output in the second box.

Enter program input (optional)

If your code requires input values, provide them here.

Run program

Input (from above)



main.py
(Your program)



Program output displayed here

Coding trail of your work [What is this?](#)

History of your effort will appear here once you begin working on this zyLab.

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