MathCodeLab – Loops

1. Write a program to print all numbers between 1 and 50 that are divisible by both 3 and 5.

2. Write a program to display the multiplication table for a given number.

3. Write a program to generate the following sequence for a given number n:

- Example: If n = 6 → **6, 3, 10, 5, 16, 8, 4, 2, 1**
- Example: If n = 15 → **15, 46, 23, 70, 35, 106, 53, 160, 80, 40, 20, 10, 5, 16, 8, 4, 2, 1**

4. A caterpillar is climbing a pole of height **H** (10 ft).

- During the day, it climbs **A** (3 ft).
- At night, it slips down **B** (2 ft).
- This continues until it reaches or passes the top.
- On the final day, it does not slip back.
- ***Write a program to determine how many days it will take the caterpillar to reach the top.***