

## 15 Loop Exercises for Beginners (For & While Loops)

1. Print even numbers 2 to 10 (for loop)

Use a `for` loop to print even numbers from 2 to 10.

2. Repeat "Hi" 7 times (while loop)

Use a `while` loop to print "Hi" exactly 7 times.

3. Sum of numbers 1 to 8 (for loop)

Use a `for` loop to calculate and print the sum of numbers from 1 to 8.

4. Count up from 1 to 6 (while loop)

Use a `while` loop to print numbers from 1 to 6, then "Done!".

5. Print multiples of 3 up to 15 (for loop)

Use a `for` loop to print multiples of 3 from 3 to 15.

6. Decrement by 5 from 30 (while loop)

Use a `while` loop to print 30, 25, 20, 15, 10, 5.

7. Even or odd checker (for loop with if/else)

Use a `for` loop from 1 to 10. For each number, print if it's even or odd using `if/else`.

8. Product of first 4 numbers (while loop)

Use a `while` loop to calculate and print the product of numbers 1 to 4.

9. Simple menu loop (while loop with if/elif/else)

Use a `while` loop to simulate a menu: Print options 1-3, take user input (1=print "Yes!", 2=print "No", 3=exit). Loop until 3.

Example interaction:

Choose: 1

Yes!

Choose: 2

No

Choose: 3

Goodbye!

#### 10. Square numbers 1-5 (for loop with if)

Use a `for` loop to print squares of 1 to 5, but skip 3 using `if`.

#### 11. Backward countdown with check (while loop with if/else)

Use a `while` loop to countdown from 8 to 1. If the number is 5, print "Halfway!" instead of 5.

#### 12. Vowel counter (for loop with if/elif)

Use a `for` loop to check each letter in "hello" and count vowels (a,e,i,o,u) using `if/elif`. Print the count.

#### 13. Diamond pattern (nested for loops)

Use nested `for` loops to print a small diamond of asterisks (4 rows up, 3 down).

#### 14. Guess my number game (while loop with input and if/else)

Use a `while` loop: Secret number is 7. Prompt user to guess (1-10). If too low: "Higher!", too high: "Lower!", correct: "Got it!" and break.

Example interaction:

Guess (1-10): 4

Higher!

Guess (1-10): 9

Lower!

Guess (1-10): 7

Got it!

15. Average of positives (while loop with input and if)

Use a `while` loop to ask for 5 numbers. Only add positive ones to a sum/count, ignore negatives. Print the average of positives at end.