

✔ Congratulations! You passed!

Grade received 100% To pass 80% or higher

Go to next item

1. How are while loops and for loops different in Python?

1 / 1 point

- ☐ While loops can be used with all data types, for loops can only be used with numbers.
- ☐ For loops can be nested, but while loops can't.
- ☒ While loops iterate while a condition is true, for loops iterate through a sequence of elements.
- ☐ While loops can be interrupted using break, for loops using continue.

✔ Correct

You got it! We can use while loops when we want our code to execute repeatedly while a condition is true, and for loops when we want to execute a block of code for each element of a sequence.

2. Which option would fix this for loop to print the numbers 12, 18, 24, 30, 36?

1 / 1 point

```
1 for n in range(6,18,3):
2     print(n*2)
```

☐

```
1 for n in range(6,18,3):
2     print(n+2)
```

☒

```
1 for n in range(6,18+1,3):
2     print(n*2)
```

☐

```
1 for n in range(12,36,6):
2     print(n*2)
```

☐

```
1 for n in range(0,36+1,6):
2     print(n)
```

✔ Correct

Great job! To include 18 in the range, add 1 to it. The second parameter could be written as 18+1 or 19.

3. Which **for** loops will print all even numbers from 0 to 18? Select all that apply.

1 / 1 point

☒

```
1 for n in range(19):
2     if n % 2 == 0:
3         print(n)
```

✔ Correct

Correct! This loop will print all even numbers from 0 to 18. The range of "n" will start at 0 and end at 18 (the end range value of 19 is excluded). The variable "n" will increment by the default of 1 in each iteration of the loop. The if statement uses the modulo operator to test if the "n" variable is divisible by 2. If True, the if statement will print the value of "n" and exit back into the for loop for the next iteration of "n".

☐

```
1 for n in range(18+1):
2     print(n**2)
```

☐

```
1 for n in range(0,18+1,2):
2     print(n*2)
```

☒

```
1 for n in range(10):
2     print(n+n)
```

✓ **Correct**

Correct! This loop will print all even numbers from 0 to 18. The range of "n" will start at 0 and end at 9 (the end range value of 10 is excluded), with "n" incrementing by the default of 1 in each iteration of the loop. The format of (n+n), where n is an integer, is equivalent to the expression (n*2). This expression ensures the resulting integer will be an even number. The last iteration would print the result of the calculation 9+9.

4. Fill in the blanks so that the for loop will print the first 10 cube numbers (x^{**3}) in a range that starts with $x=1$ and ends with $x=10$.

1 / 1 point

```
1 for n in range(1,11):
2     print(n**3)
```

Run
Reset

✓ **Correct**

You nailed it! You got the code to print the first 10 cubes.

5. Write a for loop with a three parameter range() function that prints the multiples of 7 between 0 and 100. Print one multiple per line and avoid printing any numbers that aren't multiples of 7. Remember that 0 is also a multiple of 7.

1 / 1 point

```
1 for i in range(0, 101, 7):
2     print(i)
```

Run
Reset

✓ **Correct**

Awesome! You're getting Python to do all the work for you.