

for Loop Recap:

- for loops have a loop variable that iterates over a set of values
 - >>> for var in range(4): → var iterates over [0, 1, 2, 3]
(expression)
 - >>> for var in range(4, 6): → var iterates over [4, 5]
- range is a way to iterate over numbers, but a for loop variable can iterate over any set of values, not just numbers.

Guess & Check:

- the process below are also called : **Exhaustive enumeration**
- given a problem
- you are able to guess a value for solution
- you are able to check if the solution is correct
- keep guessing until find solution or guessed all values.

guess & check - cube root

```
>>> cube = 8  
>>> for guess in range(cube + 1)  
    if guess**3 == cube  
        print("Cube root of", cube, "is", guess)  
        break  
    else:  
        if guess**3 != abs(cube):  
            print(cube, "is not a perfect cube")  
        else:  
            print(cube, "is a perfect cube")
```