

# CONSTANTS

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- A constant is a variable that has a value that should not change!
- Python does not have any restrictions regarding constants so it is conventional to name constant variables with all upper case letters
  - All Python programmers know that if a variable name is written in all upper case letters, the value of that variable should not be changed because it is a constant!

This is a constant!

```
1 → PI = 3.14  
2
```

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- Why use constants?
  - It makes code more readable
  - If you are using the same values over and over again in your code base it makes sense to create a constant
  - It saves work when you need to make a change
  - Makes sense when you need to set some limits
    - As an example if your program has to limit an amount a user can input, then you could store the MAX as a constant

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- Here is a classic example of how useful constants can be
- The number PI will never change so it makes sense to create constant to hold it's value
  - It is also much more readable than writing the number 3.14 over and over again

```
1  PI = 3.14
2
3  def area_of_circle(radius):
4      return PI * radius**2
5
6  def circumference_of_circle(radius):
7      return 2 * PI * radius
```