

[Back to Code in Place](#)

Random

At time, you will want a way to generate random numbers. Say, for example, when making games or artwork. To get a random number we use the python random number library. One you have imported the library:

```
import random
```

You get access to the following functions:

Function	What it does
<code>random.randint(min, max)</code>	Returns a random integer between min and max, including both min and max.
<code>random.random()</code>	Returns a random real number (float) between 0 and 1.
<code>random.uniform(min, max)</code>	Returns a random real number (float) between min and max.
<code>random.seed(1)</code>	Fixes the random generator so that it gives the same sequence of numbers each time. Can change 0 to another number for a different fixed sequence. Helpful for debugging!

As a "pro tip", if you generate a random number, save the result into a variable. Here are a few examples:

```
# file single_dice.py
import random

def main():
    # generate a random number between min value 1 and max value 6
    dice_roll = random.randint(1, 6)
    print('dice value:', dice_roll)
```

Each time you run this program you may get a different result. How exciting! Here is the output of three different executions of the same program. Here are a few examples of running this program, `single_dice.py` from the console five times:

```
[user@sahara ~]$ python single_dice.py
dice value: 3

[user@sahara ~]$ python single_dice.py
dice value: 6

[user@sahara ~]$ python single_dice.py
dice value: 5

[user@sahara ~]$ python single_dice.py
dice value: 5

[user@sahara ~]$ python single_dice.py
dice value: 1
```

Rolling two dice

Here is an example which simulates rolling two dice, and showing the user the result. This example highlights why it is important to save the result of a randint to a variable. You might want to use the same value in multiple places in your program!

Python Reader

Introduction

Interpreter

Variables

print

input

Math and expressions

Constants

random

Booleans

if

while

for

```
import random

# use a constant for the number of sides on the dice
NUM_SIDES = 6

def main():
    # setting seed is useful for debugging
    # random.seed(1)

    die1 = random.randint(1, NUM_SIDES)
    die2 = random.randint(1, NUM_SIDES)

    # this computes the sum and saves the result to a variable named total
    total = die1 + die2

    print("Dice have", NUM_SIDES, "sides each.")
    print("First die:", die1)
    print("Second die:", die2)
    print("Total of two dice:", total)
```

[Back to Code in Place](#)