



EXERCISES — Pi generator

version #



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1 Pi generator

Files to submit:

- pi_generator/pi_generator.c

Provided files:

- pi_generator/pi.decimal

Authorized headers: You are only allowed to use the functions defined in the following headers:

- assert.h
- errno.h
- stddef.h
- err.h

1.1 Goal

Using the given formula, write a function that computes an estimation of pi: $\pi = 2 * (1 + 1/3 * (1 + 2/5 * (1 + 3/7 * (...))))$

Your function should be named:

```
double pi_generator(int precision)
```

The function takes as parameter the number of time that the operation $1 + i / (i * 2 + 1)$ should be repeated.

Tips

To test your code, we provide you a file with some decimals of pi.

It is my job to make sure you do yours.