

# 0. Revision

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# Exercises

- 1 Write a program that writes if a number given in its argument is divisible by 3
- 2 Write a function that returns a boolean value whether a number given in argument is divisible both by 5 and 7
- 3 Write a function that reads a file and adds an interpolated value between each two values

# Advanced Exercises

- 1 Write a function that reads a file and adds an interpolated value between each two values, but interpolates better than linearly
- 2 Create a class for representing numbers in modular arithmetic (if the modulo is 7, then  $1 + 1 = 2$ , but  $4 + 4 = 7 + 1 = 1$ ) that support addition, subtraction, multiplication, division and square root, returning a vector of results if more results are possible, allowing to assign this vector into it, keeping the first value

## Exercises #2

- 1 Write a `circle` struct that contains three member numbers `radius`, `x`, `y` that are set to 1, 0, 0 respectively when instantiated
- 2 Write a `rectangle` struct that contains four members `sizeX`, `sizeY`, `x`, `y` and modify the `circle` so that it has an `boundingRectangle` method that returns a `rectangle` class
- 3 Create an `ellipse` class that contains three member numbers `axisX`, `axisY`, `x`, `y` that are set to 1, 1, 0, 0 respectively when instantiated and has a `boundingRectangle` method

# Homework

- No homework yet