Question 1. [10 MARKS]

Part (a) [1 MARK]

Suppose we have a class called `Kettle`, with an initializer and two additional methods: `fill` and `boil`. No methods in class `Kettle` call `fill` or `boil`. What code is responsible for ensuring that the preconditions in the docstring of method `boil` hold? Circle all that apply.

1. the initializer for class `Kettle`
2. the `fill` method for class `Kettle`
3. the `boil` method for class `Kettle`
4. client code of the `Kettle` class

Solution: (4)

Part (b) [1 MARK]

Suppose class `High` is the parent of class `Low`. The initializer for `High` creates public attribute `this` and private attribute `_that`. The initializer for `Low` has one line: `self._other = 15`. If we make an instance of Low, what attributes does it have? Circle all that apply.

1. `this`
2. `_that`
3. `_other`

Solution: (3)

Part (c) [3 MARKS]