Home Exercise #4 Testing and SCM

Intended Learning Outcome
After passing this exercise, the student shall be able to:

- explain the differences between unit, integration, system, and acceptance testing
- construct test cases based on both equivalence class and boundary value testing techniques.
- explain the differences between white-box and black-box testing.

Problem description
You are developing a system checking whether goods can be sent as a Swedish domestic letter or not. The requirements are:

Minimal sizes
- Envelope:
  1. Length x width: 140mm x 90 mm
- Cylinder:
  2. Length: 100 mm and
  3. Length + 2 x diameter: 170 mm

Maximal sizes
- Envelope:
  4. Length: 600 mm and
  5. Length + width + thickness: 900 mm
- Cylinder:
  6. Length 900 mm and
  7. Length + 2 x diameter: 1040 mm

Task
a) Specify the input parameters, output parameter, and equivalence classes. Motivate why you made your choices.
b) Create a table of test cases for testing the system using boundary value testing (based on the equivalence classes in task a). Each test case shall contain test-case number, input, expected output, and what equivalence class the test-case belongs to. Create in total 6 test cases.
c) What level of testing did you create the test cases in task b) for? Unit, integration, system, or acceptance testing? Motivate your answer.
d) Did task a) and b) concern white-box or black-box testing? Give a short explanation of the testing technique (white-box or black-box) that was not used in task a) and b).

Report
Written answers to each of the tasks. Max 1---2 A4 page(s) in total. The test case table for task b) can be on a separate page.

Pass criteria
Well motivated answers to all questions. The test case table contains all required fields.