

Assignment 01 Test Cases

This document contains test cases for the following two programs:

1. Program to calculate daily, yearly, and 10-year profits based on the number of bottles sold.
2. Program to swap two numbers using a swap function.

```
first_program.cpp x
4      * Onur (Honor) Onel
5      * Student Number: 0865803
6      * Student Email: onuronel@trentu.ca
7      * Date: 2025-01-27
8      *
9      * Program Description:
10     * This program calculates the daily, yearly, and 10-year profits
11     * based on the number of bottles sold in a single day. The program
12     * prompts the user to enter the number of bottles sold, then uses
13     * predefined constants for bottle price and days in a year to compute
14     * the required profits.

Run first_program.cpp x
/home/onel/git/COIS2040/Assignment1/first_program
Enter the total number of bottles sold today:
100
You have sold: 100 bottles and today's profit is: $22.00
You have sold: 36500 bottles the yearly profit is: $8030.00
You have sold: 365000 bottles the 10 yearly profit is: $80300.00

Process finished with exit code 0
```

```
second_program.cpp x
2      /*
3      * Onur (Honor) Onel
4      * Student Number: 0865803
5      * Student Email: onuronel@trentu.ca
6      * Date: 2025-01-27
7      *
8      * Program Description:
9      * This program demonstrates a simple swap function that exchanges the values
10     * of two integers using reference variables. The program prompts the user to
11     * input two integers, swaps their values using the swap function, and then
12     * displays the results.

Run second_program.cpp x
/home/onel/git/COIS2040/Assignment1/second_program
Enter first number: 13
Enter second number: 31

Numbers has been swapped...

The first number becomes: 31
The second number becomes: 13

Process finished with exit code 0
```

Test Cases for Part 1

Test Case	Input (Number of Bottles Sold)	Expected Output (Daily Profit, Yearly Profit, 10-Year Profit)	Description	Result
TC1	10	Daily: \$2.20, Yearly: \$803.00, 10-Year: \$8030.00	Valid input, small number of bottles	Pass/Fail
TC2	0	Error: Please enter a positive number	Edge case: zero bottles sold	Pass/Fail
TC3	-5	Error: Please enter a positive number	Invalid input: negative number	Pass/Fail
TC4	365	Daily: \$80.30, Yearly: \$29,299.50, 10-Year: \$292,995.00	Edge case: one bottle per day	Pass/Fail
TC5	1000	Daily: \$220.00, Yearly: \$80,300.00, 10-Year: \$803,000.00	Valid input, large number of bottles	Pass/Fail

Test Cases for Swap Function Program

Test Case ID	Input (First Number, Second Number)	Expected Output (After Swap)	Description	Result
TC1	(5, 10)	(10, 5)	Valid input, small numbers	Pass/Fail
TC2	(0, 0)	(0, 0)	Edge case: both numbers are zero	Pass/Fail
TC3	(-5, -10)	(-10, -5)	Valid input, negative numbers	Pass/Fail
TC4	(99999, 12345)	(12345, 99999)	Valid input, large numbers	Pass/Fail
TC5	(0, 10)	(10, 0)	Edge case: one number is zero	Pass/Fail