## **Unit 02**

## **Exercise 02: Coffee vs. Tea Price Comparison**

**Objective:** In In this exercise, you will practice calculating ratios and percentage changes to understand how they affect the relationship between the prices of coffee and tea. You will use your student ID to explore how prices change over time and develop useful math skills for real-life situations like comparing prices.

| State your user ID: |  |
|---------------------|--|
|                     |  |

## 1. Set the Prices:

- Take the first two digits of your student ID and increase them by 15% to represent the price of **coffee**.
- Take the last two digits of your student ID and decrease them by 11% to represent the price of tea. (If your last two digits are '00', then use the first two digits of your ID decreased by 80 %.)
- **2. Calculate Ratios** (update table below with the data from each operation):
  - Calculate the ratio of the price of coffee to the price of tea
  - Adjust the prices: decrease the coffee price by 42% and increase the tea price by 31%.
  - After adjusting the prices, calculate the new ratio.

## 3. Compare the Ratios:

|        | Price | Ratio (coffee/tea) | New Price | New Ratio |
|--------|-------|--------------------|-----------|-----------|
| Coffee |       |                    |           |           |
| Tea    |       |                    |           |           |

| Look at how the ratio has changed from the original one.                             |  |                        |  |
|--|--|------------------------|--|
| What does this tell you about the relationship between the prices after the changes? |  |                        |  |
| Conclusion: The new ratio is   |  | than the original one. |  |

PS: Make sure to double-check your work!