The Initial Volume is the sum of these two volumes: V (initial) = V (pipet) + V (liquid).

The Final Volume is the volume of the volumetric flask.

The Volume Change is the volume of the flask minus the initial volume:

Volume Change = V (avg.) – V (initial).

After computing the change in volume, convert the results to percent change by using the equation: % Change = 100% Change in volume / V (initial).

Result:

For part A:

V(1) = 9.70 mL
V(2) = 9.20 mL

When mixing two volumes of the same liquid (in our case water), the resulting volume was close to the sum of the two volumes. The sum of the two volumes is within the range of uncertainty with which we can read volume using the 10 mL graduated cylinder. Even when the two different liquids (water and acetone) were mixed, the resulting volume was close to the sum of the two volumes, and the sum of the two volumes was still within the range of uncertainty with which we can read volume using the 10 mL graduated cylinder. The volume was conserved even when the same liquids were mixed, and the volume was not conserved when different liquids were mixed.

For Part B:

- Please use data table.

Mass (flask + water) = 24.5 g