Q1:

Here is an example of a function in Python that takes in the products, prices, sold products and sold prices as input and returns the number of errors in pricing:

def priceCheck(products, productPrices, productSold, soldPrice):

price\_dict = dict(zip(products, productPrices))

errors = 0

for i in range(len(productSold)):

expected\_price = price\_dict.get(productSold[i])

if soldPrice[i] != expected\_price:

errors += 1

return errors

This function first creates a dictionary from the products and productPrices lists, using the zip function. The dictionary is used to look up the expected price of a product using the product name as the key.

Then, it iterates through the productSold and soldPrice lists, comparing the recorded sale price to the expected price. If they do not match, it increments the error count.

Finally, it returns the error count.

You can test the function by calling it with the example inputs:

products = ['eggs', 'milk', 'cheese']

productPrices = [2.89, 3.29, 5.79]

productSold = ['eggs', 'eggs', 'cheese', 'milk']

soldPrice = [2.89, 2.99, 5.97, 3.29]

print(priceCheck(products, productPrices, productSold, soldPrice))

This should return 2, which is the number of errors in pricing.

Q2:

SELECT d.NAME as department, COUNT(e.ID) as employee\_count

FROM DEPARTMENT d

LEFT JOIN EMPLOYEE e ON d.ID = e.DEPT\_ID

GROUP BY d.NAME

ORDER BY employee\_count DESC, department ASC;

Q3:

def sum\_of\_digits(num):

return sum(int(d) for d in str(num))