**Question 15.1**

Describe a situation or problem from your job, everyday life, current events, etc., for which optimization would be appropriate. What data would you need?

# We can apply optimization to our packing problems when travelling. Given current restrictions around weight and types of items allowed by the TSA we could form an optimization problem surrounding packing all the items we need in the right types of quantities example 3ml or less of shampoo and toothpaste while minimizing the total weight allowed to make our travel light and easy.

# The data needed is:

1. Each item and its respective weight

# All the constraints/ restrictions by the TSA

1. The total allowed weight

# What items we need to have with us during our travels. (Must haves)

1. Minimum amounts of items we need (example 5 t shirts)