$$\text{Minimize} \sum_{k \in K} \sum_{(i,j) \in A} c_{ij} x_{ijk}$$

Constraints:

1. Each customer is visited exactly once:

$$\sum_{k \in K} \sum_{j \in V, j \neq i} x_{ijk} = 1 \quad \forall i \in C$$

$$\sum_{k \in K} \sum_{i \in V, i \neq j} x_{ijk} = 1 \quad \forall j \in C$$

2. Vehicle capacity:

$$\sum_{i \in C} d_i y_{ik} \leq q \quad \forall k \in K$$

3. Flow conservation constraint:

$$\sum_{j \in V, j \neq i} x_{ijk} - \sum_{j \in V, j \neq i} x_{jik} = 0 \quad \forall i \in V, \forall k \in K$$