# Locating Telecommunication Sites Problem

The Telecommunication Company has just found out that the region Newly established called 23th region of Tehran, has (**I**) **potential customers** with the **predicted value** of **V(i)** million Tomans. To cover this Customers, there are (**J**) suitable places for setting up new telecommunication sites that the distance between **Customer(i)** and **Site(j)** is equal to **d(i)(j)**.The cost per meter of using wire is equal to Cm Toman, so the cost of using wire for **Customer(i)** from **Site(j)** equals to **d(i)(j)×Cm**.

On the one hand, if the Site services **more than 8** users, there will be a need for **more advanced equipment** At a **Ca price (in million Tomans)**. It should be noted that each customer can service from up to one Site. Currently, the Telecommunication Company is connected to infinite budgetary resources and has no limitations in this regard, but it asks you to increase the profits of this project so that it can finance its next projects as well.

On the other hand, the Telecommunication Company tends to establish **at least 5** telecommunications sites in the area to prevent future problems and has predicted that if any Site is established Less, it will lose **3.5 million Tomans** in the next 30 years. Finally, the Telecommunication Company likes to **minimize** the amount of **copper wire** used for this project (the price per meter of copper wire is equal to **Cm million Tomans**).