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来源：牛客网

题号：NC24852

时间限制：C/C++ 1秒，其他语言2秒

空间限制：C/C++ 32768K，其他语言65536K

64bit IO Format: %lld

**题目描述**

**The good folks in Texas are having a heatwave this summer. Their Texas Longhorn cows make for good eating but are not so adept at creating creamy delicious dairy products. Farmer John is leading the charge to deliver plenty of ice-cold nutritious milk to Texas so the Texans will not suffer the heat too much. FJ has studied the routes that can be used to move milk from Wisconsin to Texas.**

1. **folks** **[plural]** **(informal)** a friendly way of addressing more than one person各位；大伙儿 **the good folks** 好朋友
2. **address ~ sb (as sth) to use a particular name or title for sb when you speak or write to them 称呼（某人）；冠以（某种称呼）**
3. **heatwave ˈhiːtweɪv//** **n** 酷热期；热浪
4. **horn hɔːrn//** **n** 角
5. **make for something vt to help to make sth possible 促成**
6. **adept əˈdept// adj adept (at/in something) | adept (at/in doing something)** good at doing something that is quite difficult内行的；熟练的；擅长的
7. **creamy delicious dairy products 美味奶油乳制品**
8. **creamy ˈkriːmi//** adj像奶油的；光滑细腻的；含乳脂的
9. **dairy ˈderi// adj**牛奶的；奶制的；乳品的
10. **lead the charge to do sth** 带头做某事
11. **deliver** **dɪˈlɪvər//** **[transitive] deliver somebody/something (up/over) (to somebody)** (formal) to give somebody/something to somebody else so that they are under this person’s control交出；交付；移交
12. **nutritious nuˈtrɪʃəs// adjective** (of food食物 ) very good for you; containing many of the substances which help the body to grow有营养的；营养丰富的

**These routes have a total of T (1 <= T <= 2,500) towns conveniently numbered 1..T along the way (including the starting and ending towns).**

**这些路线沿途总共有T（1<=T<=2,500）个小镇。为了方便，小镇编号为1~T（包括第一个小镇和最后一个小镇）。**

1. **route** **ruːt//** **n** a way that you follow to get from one place to another路线；路途
2. **total** **ˈtoʊtl//** **n** the amount you get when you add several numbers or amounts together; the final number of people or things when they have all been counted 总数；总额；合计；总计
3. **conveniently** **kənˈviːniəntli//**
   1. **convenient kənˈviːniənt// adj** **~ (for sb/sth)** useful, easy or quick to do; not causing problems 实用的；便利的；方便的；省事的
4. **number [transitive]** to give a number to something as part of a series or list标号；给…编号

**number something + noun** The doors were numbered 2, 4, 6 and 8. 门上的编号为 2、4、6 和 8。

**Each town (except the source and destination towns) is connected to at least two other towns by bidirectional roads that have some cost of traversal (owing to gasoline consumption, tolls, etc.).**

**Each town is connected to at least two other towns by bidirectional roads. 每个城镇通过双向道路至少与两个其他城镇相连。**

1. **except prep** (also except for) used before you mention the only thing or person about which a statement is not true（用于所言不包括的人或事物前）除…之外
2. **connect ~ A to/with B | ~ A and B** to join together two or more things; to be joined together （使）连接；联结

**eg1:** The towns are connected by train and bus services.

这些城镇由火车和公共汽车连接起来。

1. **bidirectional**  **ˌbaɪdəˈrekʃənl// adj** functioning in two directions双向的

**Consider this map of seven towns; town 5 is the source of the milk and town 4 is its destination (bracketed integers represent costs to traverse the route):**

1. **owing to ˈoʊɪŋ//** because of因为；由于
2. **gasoline** **ˈɡæsəliːn// n** 汽油
3. **consumption kənˈsʌmpʃn// [uncountable]** the act of using energy, food or materials; the amount used（能量、食物或材料的）消耗，消耗量
4. **toll toʊl//** **[countable]** money that you pay to use a particular road or bridge（道路、桥梁的）通行费
5. **bracket ˈbrækɪt// bracket something** to put words, information, etc. between brackets用括弧括上
6. **traverse trəˈvɜːrs// [动词 + 名词短语]**(formal,or technical 术语) to cross an area of land or water 横过；横越；穿过；横渡

**Traversing 5-6-3-4 requires spending 3 (5->6) + 4 (6->3) + 3 (3->4) = 10 total expenses. Given a map of all the C (1 <= C <= 6,200) connections (described as two endpoints R1i and R2i (1 <= R1i <= T; 1 <= R2i <= T) and costs (1 <= Ci <= 1,000), find the smallest total expense to traverse from the starting town Ts (1 <= Ts <= T) to the destination town Te (1 <= Te <= T).**

1. **expense** **ɪkˈspens//** **[uncountable]** the money that you spend on something费用；价钱
2. **describe ~ sb/sth (to/for sb) | ~ sb/sth (as sth)** to say what sb/sth is like 描述；形容；把…称为
3. **endpoint n** 终点，端点