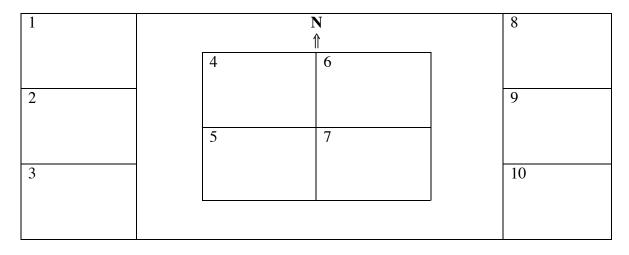


## **Sustainable Practices**

UNODOS says: The Boston Advanced PHysics Laboratories is committed to sustainable, environmentally friendly practices. For example, we encourage our employees to grow their own vegetables, in garden plots located directly above our nuclear waste disposal facilities.

There are 10 plots in the community garden, numbered 1 through 10 as shown below. Plots 4 to 7 are in raised beds; the other plots are at ground level. Two plots are considered to be adjacent if they share an edge in common (not just a corner).



Esther, Hildegarde, Kara, Mary, and Will were each assigned two plots in the garden. No person had two adjacent plots.

Each plot was devoted to one of five crops: cauliflower, garlic, radishes, spinach, and tomatoes. There were two plots devoted to each of the crops.

Each person grew two different crops. No two people grew the same pair of crops. No two adjacent plots had the same crop.

Each plot yielded a whole number of kilograms of produce, from 1 to 5 inclusive. (When comparing amounts of produce, the kind of produce is irrelevant; only the mass matters) Each plot yielded the same amount of produce as exactly one other plot.

No two adjacent plots yielded the same amount of produce. No two plots devoted to the same crop yielded the same amount of produce.

No two plots owned by the same person yielded the same amount of produce. No two people grew the same total amount of produce.



## **Sustainable Practices**

Esther, who grew the largest total amount of produce, had exactly twice as much produce as Kara, who had the least amount of produce.

The total amount of produce grown by Will was exactly halfway between the amounts of produce grown by Hildegarde and Kara.

Everyone but Mary had a plot in the raised beds.

Kara and Mary did not have two adjacent plots. Will and Hildegarde did not have two adjacent plots. Every other pair of people had adjacent plots.

The yield from one of Kara's plots was equal to the sum of the yields from the adjacent plots. The yield from one of Hildegarde's plots was equal to the difference of the yields from the adjacent plots. The yield from one of Esther's plots was equal to the average (arithmetic mean) of the yields from the adjacent plots.

The two radish plots were at opposite corners of the garden.

Hildegarde had the plots in the northeast corner of the garden and the northeast corner of the raised beds.

Mary's cauliflower plot was directly to the north of Esther's garlic plot. Kara's spinach plot was directly to the north of Will's garlic plot.

Esther's tomato plot had a greater yield than Mary's tomato plot.