

## HINTS FROM THE GUARDIAN:

- i. (pyotr byev elenak a filipk kolm.) Pyotr lives between Elena and Filip.
- ii. (elena byev Aleksk a sheyana kolm.) Elena lives between Alex and the mountains.
- iii. (pyotr zuv filipk kolm.) Pyotr lives on the left of Filip.
- iv. (hana besyd Aleksk kolm.) Hana lives beside Alex.
- v. (filip ap redkak ab bru sheyana kolm.) Filip lives above Redka but below the mountains.
- vi. (tsekt redkak kolm kyelan a tsekt kyelank kolm teng-ching.) To the right of Redka lives Kyelan, and to the right of Kyelan lives Teng-Ching.
- vii. (byev teng-chingk a Irenek kolm Danyel.) Danyel lives between Teng-Ching and Irene.
- viii. (Sara bru Yi-Chiak kolm.) Sara lives below Yi-Chia.
- ix. (Irene byev Oskark a Yi-Chiak kolm.) Irene lives between Oskar and Yi-Chia.
- x. (Oskar besyd Yenak kolm.) Oskar lives next to Yena.
- xi. (byev Minak a Yenak kolm Amy.) Amy lives between Mina and Yena.
- xii. (Mina ap Redkak kolm.) Mina lives above Redka.
- xiii. (Redka tsekt Hanak ab nyev tsekt Sarak kolm.) Redka lives on the right of Hana but not Sara.

## ANSWER:

Alex: C

Mina: F

Kyelan: I

Sara: P

Danyel: L

Oskar: M

Pyotr: B

Redka: G

Irene: N

**Yena: K**

**Amy: H**

**Elena: A**

**Filip: E**

**Hana: D**

**Yi-Chia: O**

**Teng-Ching: J**

First, create a square matrix of the characters, where  $A_{11} = 1$  (Alex),  $A_{12} = 2$  (Mina) ...  $A_{21} = 5$  (Danyel) ...  $A_{44} = 16$  (Teng-Ching). Thus,

$$\begin{bmatrix} Alex & \cdots & Sara \\ \vdots & \ddots & \vdots \\ Filip & \cdots & Teng - Ching \end{bmatrix}^{(1)}$$

Replace each name in the matrix with the letter of the house. Thus, the matrix becomes:

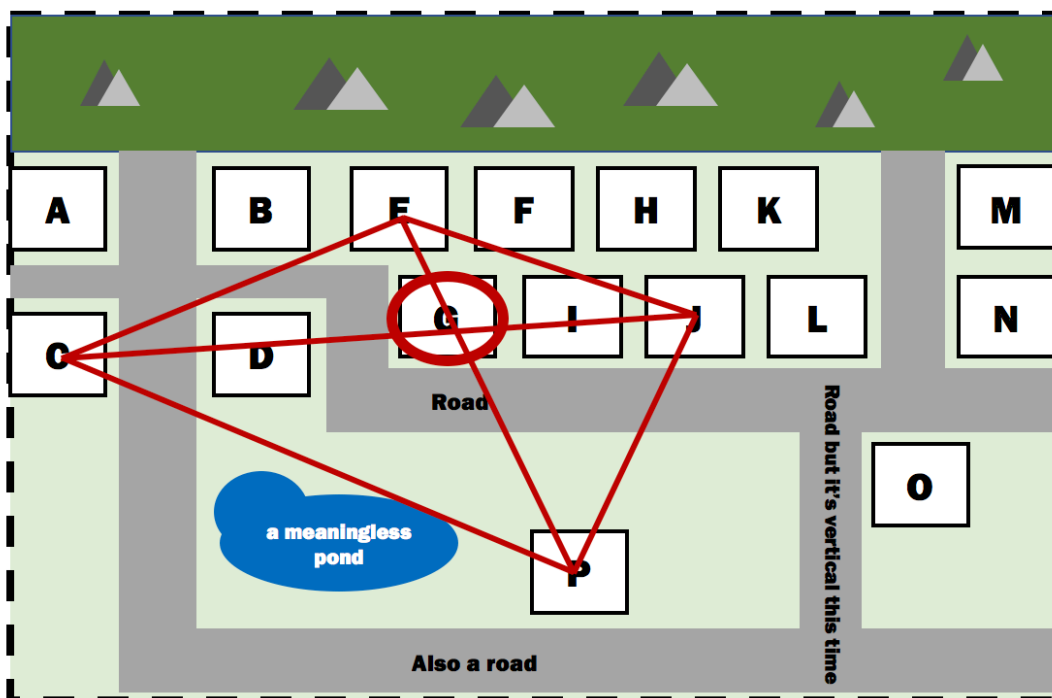
$$\begin{bmatrix} C & \cdots & P \\ \vdots & \ddots & \vdots \\ E & \cdots & J \end{bmatrix}^{(2)}$$

Then, index the letters as  $A=1$ ,  $B=2$ ,  $C=3$ ... to obtain:

$$\begin{bmatrix} 3 & \cdots & 16 \\ \vdots & \ddots & \vdots \\ 5 & \cdots & 10 \end{bmatrix}^{(3)}$$

All the rows and columns add up to 34, which is a magic square! This is not a coincidence, as the introduction of the question tells you that the friends live in a magical square. So, the next part is to realize that the question asks you to examine where the corner meets. Thus, you take the four corner numbers (3, 16, 5, 10) [C, P, E, J] and draw the six possible lines to connect all the points.

1. Alex
2. Mina
3. Kyelan
4. Sara
5. Danyel
6. Oskar
7. Pyotr
8. Redka
9. Irene
10. Yena
11. Amy
12. Elena
13. Filip
14. Hana
15. Yi-Chia
16. Teng-Ching



The names of C, P, E, J begin with **A, S, F, and T**. The name of the center G begins with **R**. A quick juggling of the letters yields the word **RAFTS**, which is the answer.