(G) Magik Yup'ik (1/1) [15 points]

Central Alaskan Yup'ik belongs to the Eskimo-Aleut language family. It is spoken in western and southwestern Alaska by around 20,000 speakers. Two other Yup'ik languages are still spoken: the Alutiiq language and the Siberian Yup'ik language.

Yup'ik people have an interesting concept when it comes to counting – the words for the numbers can be broken down into meaningful parts which may be related to their body parts. For example, the word for five, *talliman*, means *an arm* and the word for six, *arvinlegen*, means *cross over*, as you need to change hand to go on counting.

The Yup'ik people often include geometry in their Yup'ik parkas, often having border patterns. One such pattern comes in the form of a 3 by 3 square:

^{1}(a)	^{2}9	^{3}(b)
^{2}(c)	(d)	(e)
^{3}(f)	(g)	(h)

A magic square can be constructed by placing the digits 1 to 9 within the cells such that the sum of all the digits in every row, column, and diagonal is the same.

To help you fill in the magic square, the following clues are given in Yup'ik. The numbers are spelled (i.e. 123 is spelled as "One hundred and twenty-three" in English). HINT: The Yup'ik name for the number 294 is yuinaat qula cetaman qula cetaman.

Across		Down	
1	Yuinaat yuinaq cetaman qula malruk	1	Yuinaat yuinaq atauciq akimiaq pingayun
2	Yuinaat akimiaq malruk akimiaq malruk	2	Yuinaat yuinaak malruk yuinaat malrunglegen qula atauciq
3	Yuinaat yuinaak malruk akimiaq atauciq	3	Yuinaat qula pingayun akimiaq atauciq

Answer these questions in the Answer Sheets.

G1. Fill in the numbers missing from the magic square above.

a. ☐   b. ☐   c. ☐   d. ☐   e. ☐   f. ☐   g. ☐   h. ☐

G2. In Yup'ik, write the number given in 1-Diagonal (Top left cell to Bottom right cell, shaded).

☐

n → a → c → l → o