

Magic Squares

A “magic square” is a square with blocks inside, each block containing one number. It is said to be “magic” when the numbers inside add up to the same number horizontally, vertically and diagonally.

In China, magic squares are said to have been invented by Huang Ti, the mythological “Yellow Emperor,” who ruled over China in the 27th Century B.C.E. The earliest mention of magic squares in the West is 130 C.E.

Try this magic square, called the Lo Shu. It is composed of nine blocks. Just add a number in each row (not necessarily the same number) so that all the rows add up to the same answer.

4	9	
3		7
8	1	

Clue:

Look at the first vertical row.

All other rows should add up to that same number.

1 According to Chinese legend, this puzzle was first seen on the back of a turtle that emerged from the Lo River after a flood, with a very unusual shell. It is therefore referred to in China as the “Lo Shu,” or Lo (River) Book. Here is a link to the pattern that was on the turtle shell <http://www.fengshuiexpert.com/magicsquare.html>

2. Now for a more challenging magic square by Cheng Ta-Wei (1593 C.E.) and corrected by Li Nien¹.

27		2	4	13	
9	11	20	22		18
32					
14	16	34	30	12	5
	6		17	26	
		33		8	

Clue: here is the answer written in Chinese numbers.

二七	二九	二	四	十三	二六
九	十一	二十	二五	二二	一八
三二	三五	七	三	二一	二三
十四	十六	三四	二四	十二	五
六	六	十五	二七	二六	十九
二	二四	世三	世五	八	十

3. Copy the first magic square using Chinese Numbers. See if your classmates can figure it out.

Acknowledgment: This unit is adapted from A Children's Palace, by Michele Shoresman and Roberta Gumport, with illustrations by Elizabeth Chang (University of Illinois Urbana-Champaign, Center for Asian Studies, Outreach Office, 3rd ed., 1986. Print edition, now out of print.)

¹ IBID. Figure 61, p.61