1.7

Friday, February 3, 2017 5:55 PM

FOM 11 **1.7 Analyzing Puzzles And Games**

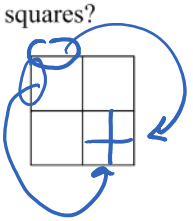
Both inductive and deductive reasoning are useful for determining a strategy to solve a puzzle or win a game.

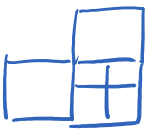
Example 1: Use four 9's in a math equation that equals 100.

$\frac{9}{9} + 99 = 99 + (9 \div 9)$

$= 100$

Example 2: The following figure is made up of 12 sticks. Can you move just two sticks and create seven squares?





Example 3: Put the numbers 1 to 8 in each square so that each side adds to the middle term.

6	5	1
4	12	8
2	7	3

1	8	4
7	13	3
5	2	6

8	1	5
2	14	6
4	7	3

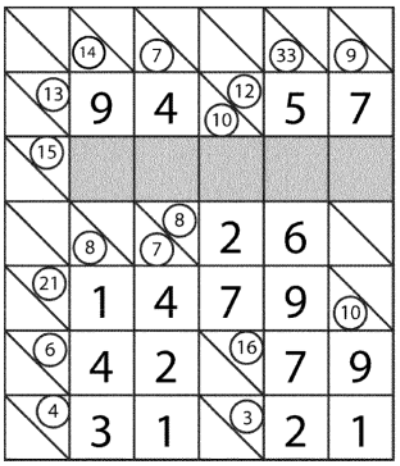
8	4	3
1	15	5
6	2	7

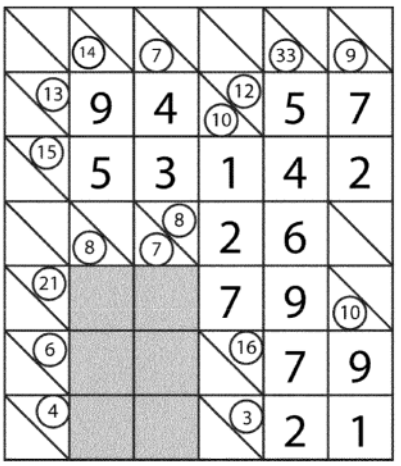
1, 2, 3, 4, 5, 6, 7, 8

Kakuro is an arithmetic puzzle in a grid. You must place the digits 1 to 9 into a grid of squares so that **each horizontal or vertical run of white squares adds up to the clue** printed either to the left of or above the run.

No digit can be repeated within any single run. Runs end when you reach a non-white square. Every puzzle has **a single unique solution** and can be solved purely by logic - **no guessing is required**.

Example 4: Complete the following Kakuro puzzles by filling in the grey squares.





HW.

Assignment: pg. 55 #4, 5, 6, 7, 9, ~~10~~, 11