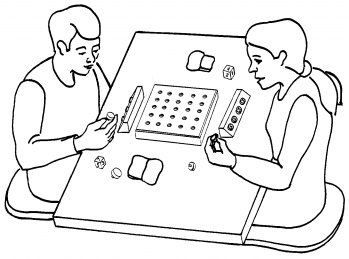
Contents:

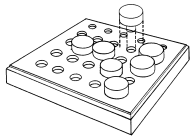
1 Baseboard with 25 holes
2 Holding blocks (4 holes per block)
2 Bags (red and blue)
3 Dice (red, blue, and white)
2 Py pegs (red and blue) - use as wild pegs (can be any number)
36 Red pegs (4 pegs for each number 1 through 9. The number 6 is underlined.)
36 Blue pegs (4 pegs for each number 1 through 9, The number 6 is underlined.)
1 Instruction sheet
1 Container box

Set up the game (general):

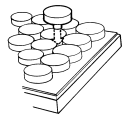
Each player should have one (red or blue) bag of game pegs and holding block. Place baseboard and holding blocks as picture below. Each Player draws four pegs (except Game A and E) randomly from his/her bag and places them on his/her holding block.



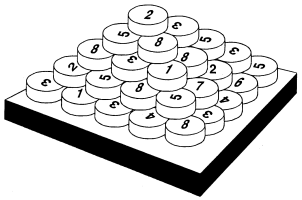
How to build the pyramid:



Level - 1



Level - 2



Completed (Level 1 through 5)

How to win the game

After the pyramid has been built the player with more pegs on the baseboard wins. If one player runs out of pegs during the course of the game, that player is the winner.

How to play

A. Learning Numbers

Set up: Each player chooses one die (red or blue) and one game bag (same color as die). The baseboard should be placed between players. The holding blocks and white die are not needed for this game.

Step 1: Each player rolls his/her die.

Step 2: Whoever rolls higher number picks the same number of pegs as the number shown on his/her die and places them anywhere on the baseboard.

Step 3: Repeat steps 1 and 2 until the pyramid is complete or until one player runs out of pegs.

B. Plus-Minus

Set up: Same as the general set up.

Step 1: Decide how many and which dice to use:
red (1 to 6) and blue (1 to 6), or
red (1 to 6) and white (7 to 12), or
If you need a higher target number, use all three: red, blue, and white.

Step 2: Select level of difficulty
Each player must use the number of pegs indicated below for each round. The more pegs required, the more difficult.
Novice – use one or more pegs
Intermediate - must use 2 or more pegs
Advance - must use 3 or 4 pegs
Master - must use all 4 pegs

Step 3: One player rolls the dice selected from step 1.
Step 4: Both players calculate a target number by **adding** numbers on the dice.
Step 5: Each player competes to construct the target number with pegs from his/her holding block using **addition, subtraction, or both**. Each player must use the number of pegs required by his/her difficulty level for each round.
Step 6: Whoever first finds a combination for the target number declares "**I got it!**" and places those pegs used for the target number anywhere on the baseboard.
Example (red die=2 and blue die=4 then the target number=6):
If you have 8, 2, 4, Py (Py is a wild peg) on your holding block,

Use Py as 6 or,
2 + 4 = 6 or,
8 - 4 + 2 = 6 or,
8 – 4 – 2 + Py = 6 (use Py as 4).

Step 7: Whoever puts pegs on the baseboard refills holding block and rolls dice.

Step 8: Repeat step 3 through 7 until the pyramid is complete, or one player runs out of pegs, or no one has answer.

Penalty: The declarer should always immediately show his/her work to the opponent. If the declarer fails to explain or has a wrong answer, the opponent may place his/her pegs for answer or one peg if no answer is to be found on the baseboard.

C. All Operations

Set up: Same as the general set up.

Step 1 - 4: Same as Plus-Minus

Step 5: Each player competes to construct the target number with pegs from his/her holding block using **addition, subtraction, multiplication, division, or any combinations**. Each player must use the number of pegs required by his/her difficulty level for each round.

Step 6 - 8: Same as Plus-Minus

Example (For the target number=11):
Your holding block contains 3, 5, 2, and 9.

Use 2 + 9 = 11 or,
2 * 3 + 5 = 11 or,
9 / 3 * 2 + 5 = 11 or,
(9 - 5) * 2 + 3 = 11

Penalty: Same as the game B.

D. Combinations

Set up: Same as the general set up.

Step 1: Same as Plus-Minus

Step 2: For this game, each player must use all four pegs from his/her holding block.

Step 3: One player rolls the dice selected from step 1.

Step 4: Both players calculate a target number by **multiplying** numbers on the dice.

Step 5: Each player competes to construct the target number with all **four pegs** from his/her holding block using **addition, subtraction, multiplication, division, power, root, factorial, or any combinations**.

Step 6 – 8: Same as Plus-Minus

Example (For the target number=36):
Your holding block contains 8, 4, 2, and 9.
You must use all 4 numbers to construct the target number 36.

Use 8 * 9 / (4 – 2) = 36 or,
9 * 2 * 8 / 4 = 36 or,
9 * 8 / (4 / 2) = 36 or,
8 / (4 – 2) * 9 = 36 or,
(8 / 4) ^ 2 * 9 = 36 or,
8 / $\sqrt[2]{4}$ * 9 = 36 or,
9 * ((4! / 2) – 8) = 36

Penalty: Same as the game B.

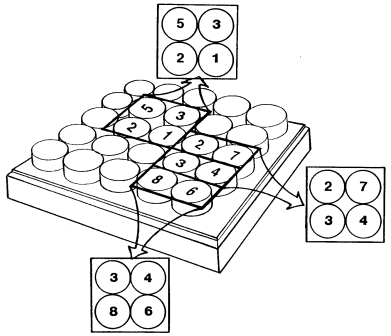
E. Squares (Solitary)

Set up: Mix all red and blue pegs together in one box and then fill all holes on the baseboard with red and blue pegs chosen at random from the box.

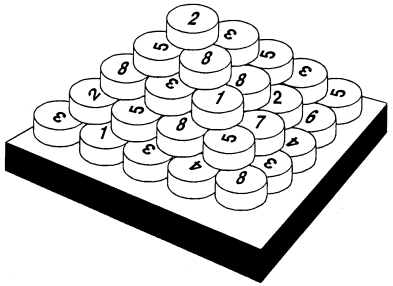
Step 1: Roll two or three dice together (your choice).

Step 2: Add (or multiply) the numbers on the dice to obtain the target number.

Step 3: Try to construct the target number with four pegs on the baseboard using all operations. Those four pegs used must be on the same level and connected each other to form a square (see figure below). When the answer is found, a peg picked randomly from box is placed in the center hole of four pegs.



Step 4: Cover holes as many as you can with the same target number. When you get stuck, roll again and repeat steps 2 and 3 until the pyramid is complete.



Py Math Game

Five Levels

- **A. Learning Numbers**
- **B. Plus-Minus**
- **C. All Operations**
- **D. Combinations**
- **E. Squares (Solitary)**

Goto www.pymath.com to download the manual with colorful and more advanced levels

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