

## Pyramid: Rules

### How to solve

- Multiplication and Division: Solve the problems from top to bottom. Each problem has one more digit than the one before.
- Sums: Start with the column on the left. Write its answer in the top box of the column to its right (1)–(6), and include it when you add up that column. Write the answer to the last column in "Answer (7)".

### Playing the game

1. Form groups of 2 to 6 players, and give each player one Lv. 1 set.
2. Set a time limit (3 minutes is recommended), and everyone starts at the same time.
3. When time is up, check the answers and count how many are correct.
4. The player with the most correct answers moves up one Lv. in the next round. Everyone else plays the same Lv. again.
5. Play several rounds. The player at the highest Lv. at the end wins.

### Variations

- Compare how many problems each player gets right in a row, starting from the first one. This builds accuracy.
- Score 2 points for each problem solved by mental calculation and 1 point for each solved on the abacus. This makes it mental calculation practice.

# Soroban Technology Lab

## Pyramid Lv. 2

Lv. 2-1

|            |    |     |       |        |          |            | (6) |
|------------|----|-----|-------|--------|----------|------------|-----|
|            |    |     |       |        |          | (5)        |     |
|            |    |     |       |        | (4)      |            |     |
|            |    |     |       | (3)    |          |            |     |
|            |    |     | (2)   |        |          |            |     |
|            |    | (1) |       |        |          |            |     |
|            |    |     |       |        |          |            |     |
| 4          | 15 | 780 | 5,179 | 39,827 | 423,589  | 3,825,471  |     |
| 6          | 29 | 651 | 8,764 | 92,576 | -459,061 | -3,962,071 |     |
| 2          | 48 | 452 | 4,318 | 35,084 | 763,819  | -2,670,134 |     |
| 1          | 97 | 549 | 5,743 | 17,403 | 538,741  | -1,792,864 |     |
| 8          | 23 | 931 | 8,095 | 93,105 | 428,360  | 1,836,549  |     |
| Answer (7) |    |     |       |        |          |            |     |

## Pyramid Lv. 2

Lv. 2-2

|            |    |     |       |        |          |            | (6) |
|------------|----|-----|-------|--------|----------|------------|-----|
|            |    |     |       |        |          | (5)        |     |
|            |    |     |       |        | (4)      |            |     |
|            |    |     |       | (3)    |          |            |     |
|            |    |     | (2)   |        |          |            |     |
|            |    | (1) |       |        |          |            |     |
|            |    |     |       |        |          |            |     |
| 7          | 79 | 634 | 3,816 | 28,059 | 809,627  | 3,986,240  |     |
| 5          | 23 | 807 | 1,427 | 30,925 | 526,143  | 3,670,918  |     |
| 9          | 85 | 672 | 2,675 | 78,314 | -548,713 | -4,210,783 |     |
| 7          | 30 | 820 | 6,501 | 26,839 | 432,956  | 8,032,457  |     |
| 2          | 41 | 473 | 2,507 | 19,503 | -478,391 | 8,096,345  |     |
| Answer (7) |    |     |       |        |          |            |     |

## Pyramid Lv. 2

Lv. 2-3

|            |    |     |       |        |          |            | (6) |
|------------|----|-----|-------|--------|----------|------------|-----|
|            |    |     |       |        |          | (5)        |     |
|            |    |     |       |        | (4)      |            |     |
|            |    |     |       | (3)    |          |            |     |
|            |    |     | (2)   |        |          |            |     |
|            |    | (1) |       |        |          |            |     |
|            |    |     |       |        |          |            |     |
| 5          | 73 | 610 | 6,137 | 43,275 | 652,948  | -1,370,694 |     |
| 7          | 18 | 753 | 3,487 | 89,026 | 814,320  | 1,397,805  |     |
| 9          | 34 | 805 | 5,104 | 74,031 | 438,905  | 6,325,198  |     |
| 5          | 51 | 642 | 7,809 | 45,963 | -970,682 | 2,584,690  |     |
| 9          | 24 | 391 | 9,265 | 70,184 | 605,237  | 6,871,340  |     |
| Answer (7) |    |     |       |        |          |            |     |

## Pyramid Lv. 2

Lv. 2-4

|            |    |     |       |        |          |            | (6) |
|------------|----|-----|-------|--------|----------|------------|-----|
|            |    |     |       |        |          | (5)        |     |
|            |    |     |       |        | (4)      |            |     |
|            |    |     |       | (3)    |          |            |     |
|            |    |     | (2)   |        |          |            |     |
|            |    | (1) |       |        |          |            |     |
|            |    |     |       |        |          |            |     |
| 4          | 68 | 580 | 4,872 | 98,057 | 843,516  | -7,095,163 |     |
| 5          | 13 | 614 | 7,530 | 53,764 | 659,437  | 3,928,054  |     |
| 8          | 25 | 859 | 5,941 | 64,295 | -894,067 | -2,071,695 |     |
| 4          | 47 | 178 | 1,386 | 94,832 | 328,419  | -6,493,507 |     |
| 5          | 51 | 705 | 8,069 | 47,821 | 157,092  | 8,612,473  |     |
| Answer (7) |    |     |       |        |          |            |     |

## Answers Pyramid

### Pyramid Lv. 2

|     | Lv. 2-1    | Lv. 2-2    | Lv. 2-3    | Lv. 2-4    |
|-----|------------|------------|------------|------------|
| (1) | 2/         | 30         | 35         | 26         |
| (2) | 233        | 288        | 235        | 230        |
| (3) | 3,763      | 4,639      | 3,760      | 3,492      |
| (4) | 48,569     | 32,006     | 50,604     | 47,535     |
| (5) | 480,756    | 436,089    | 546,272    | 526,906    |
| (6) | 2,931,123  | 2,634,013  | 1,817,109  | 1,299,263  |
| (7) | 13,677,751 | 23,902,911 | 17,453,015 | 18,797,255 |