Greatest-Least

Use any of the operations: addition, subtraction, multiplication and division.

An operation may be used more than once.

Create the greatest answer.

1. Use the numbers: 2, 7, and 8
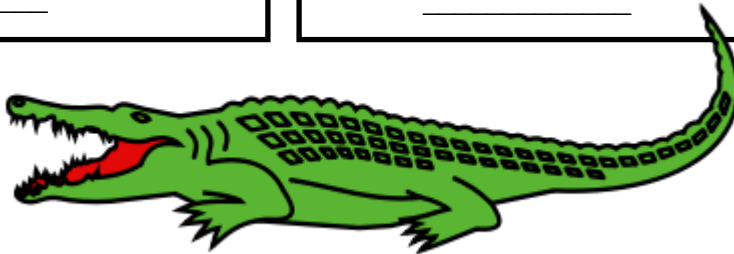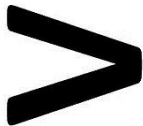
   _____

2. Use the numbers: 3, 4, and 16

   _____

Create the least answer.

3. Use the numbers: 4, 5, and 9

   _____

4. Use the numbers: 2, 9, and 13

   _____

Fifty-Fifty

1. What number is 50 more than 50% of 50% of 50?

   _____

2. What number is 60 more than 60% of 60% of 60% of 60?

   _____

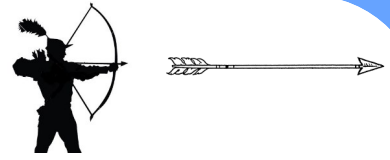### MATHgazine Editors

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Follow the Arrows

The dots mean that the pattern continues.

●	●	●	●	●	●	●	●
57	●	●	●	●	●	●	●
49	50	51	●	●	●	●	●
41	42	43	44	●	●	●	●
33	34	35	36	37	38	39	40
25	26	27	28	29	30	31	32
17	18	19	20	21	22	23	24
9	10	11	12	13	14	15	16
1	2	3	4	5	6	7	8
●	●	●	●	●	●	●	●

Examples

4 ➔ = 5   ← 20 = 19

5 ↑ = 13   5 ↓ = -3

39 ➔ ➔ ➔ = 42   51 ➔ ➔ ↑ = 61
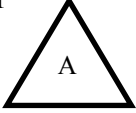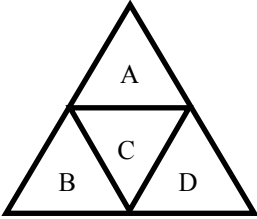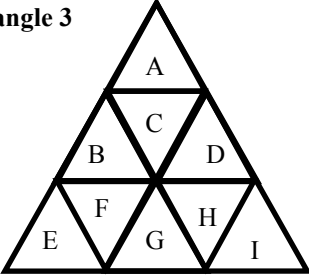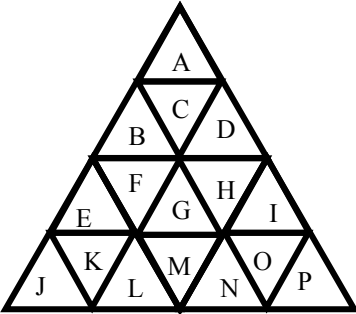
Complete the problems.

1. 29 ← ↓ ↓ =_____   5. 4 ↗ ↗ =_____

2. 43 ↑ ↑ ↓ ↓ ➔ =_____   6. 23 ↑ ➔ ↙ =_____

3. 12 ↓ ↓ =_____   7. 39 ↖ ↗ ↓ ↓ =_____

4. 17 ↓ ↓ ↓ ↓ ↑ =_____   8. 14 ↓ ↓ ↓ ↓ ← =_____

Hidden Triangles

Complete the Chart for Triangle 4

Triangle 1	Names of △s	Total Number of △s
A	A	1
Triangle 2	A, B, C, D ABCD	5
Triangle 3	A, B, C, D, E F, G, H, I ABCD, BEFG,DGHI ABCDEFGHI	13
Triangle 4		

βαιℤαℕθς

Balzano is a puzzle that will tap into your logical reasoning abilities. Read the directions carefully, then try your hand at Balzano Shapes.
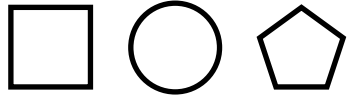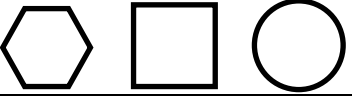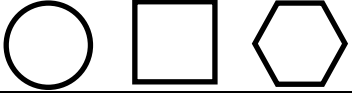
Directions:

Your job is to figure out the Desired Arrangement (the solution) of three elements (shapes) from clues that provide information about the shapes and their locations. The possible shapes are **circle, pentagon, hexagon, and square.** No shape may be repeated.

The **Arrangement Column** shows sets of shapes in rows. In the Balzano puzzle below, the second row, arranged in order from left to right, is: square, circle, pentagon.

Correct Shape in the Correct Place identifies the number of elements that are the correct shape AND are in the right place. The second row has zero shapes in the right place.

Correct Shape in the Wrong Place identifies the number of correct shapes BUT in the wrong place. There are 2 of these in the second row.

Incorrect Shape identifies the number of shapes that do not belong in the arrangement. There is 1 of these in the second row.

Arrangement	Correct shape in correct place	Correct shape in wrong place	Incorrect shape
circle, pentagon, hexagon	1	1	1
square, circle, pentagon	0	2	1
hexagon, square, circle	0	3	0
circle, square, hexagon	1	2	0
	3	0	0