Magic Triangle 1

Arrange the numbers 1 to 9

in the triangles
so that the numbers
in each row of 4 triangles

have a Sum of 17

1 2 3

4 5 6

7 8 9
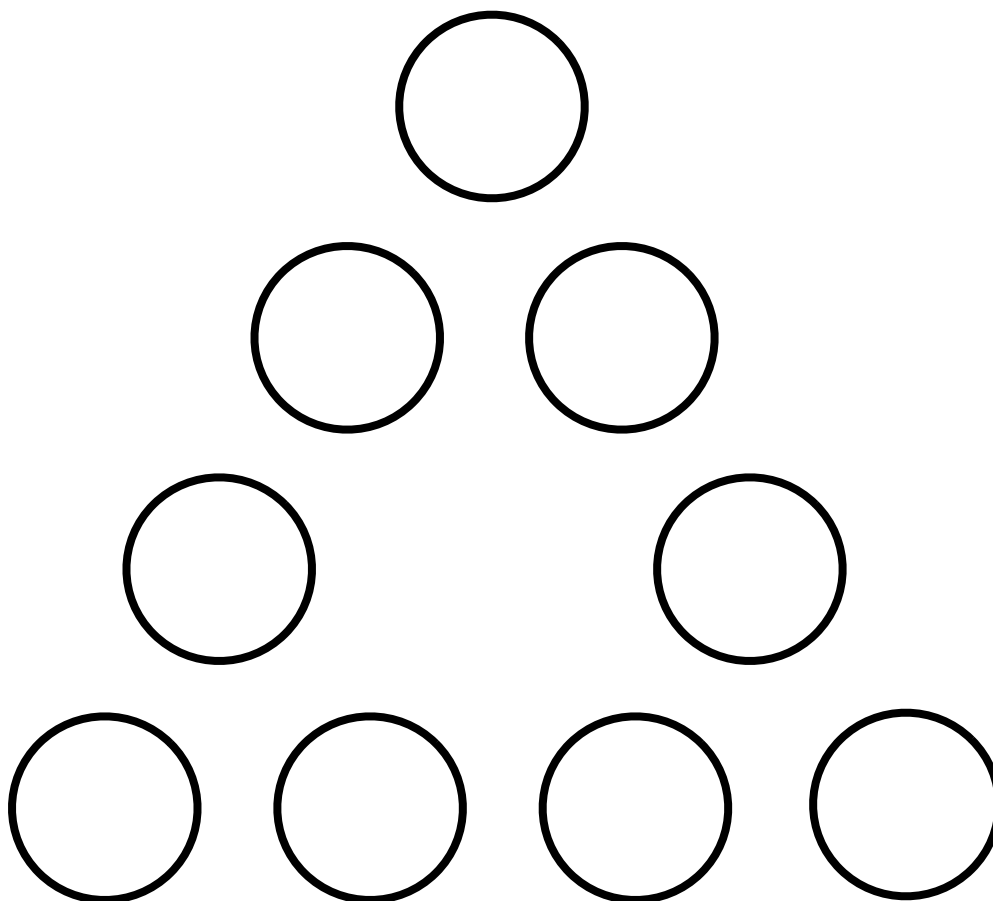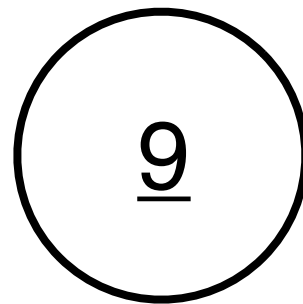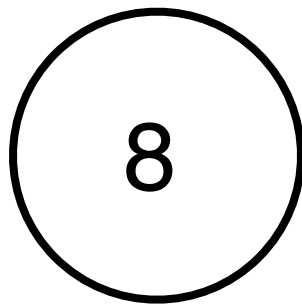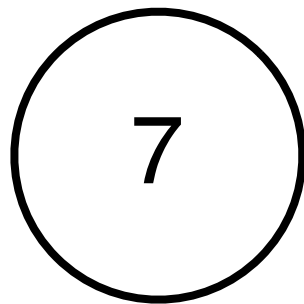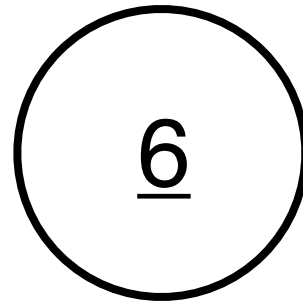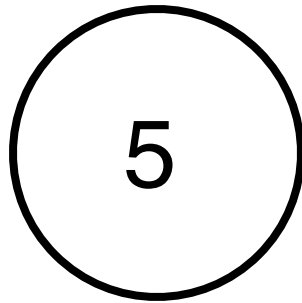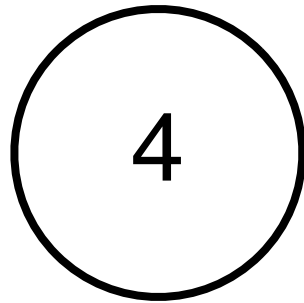
Magic Triangle 2

Arrange the numbers 1 to 9

in the triangles
so that the numbers
in each row of 4 triangles

have a Sum of 19

Magic Triangle 3

Arrange the numbers 1 to 9

in the triangles
so that the numbers
in each row of 4 triangles

have a Sum of 20
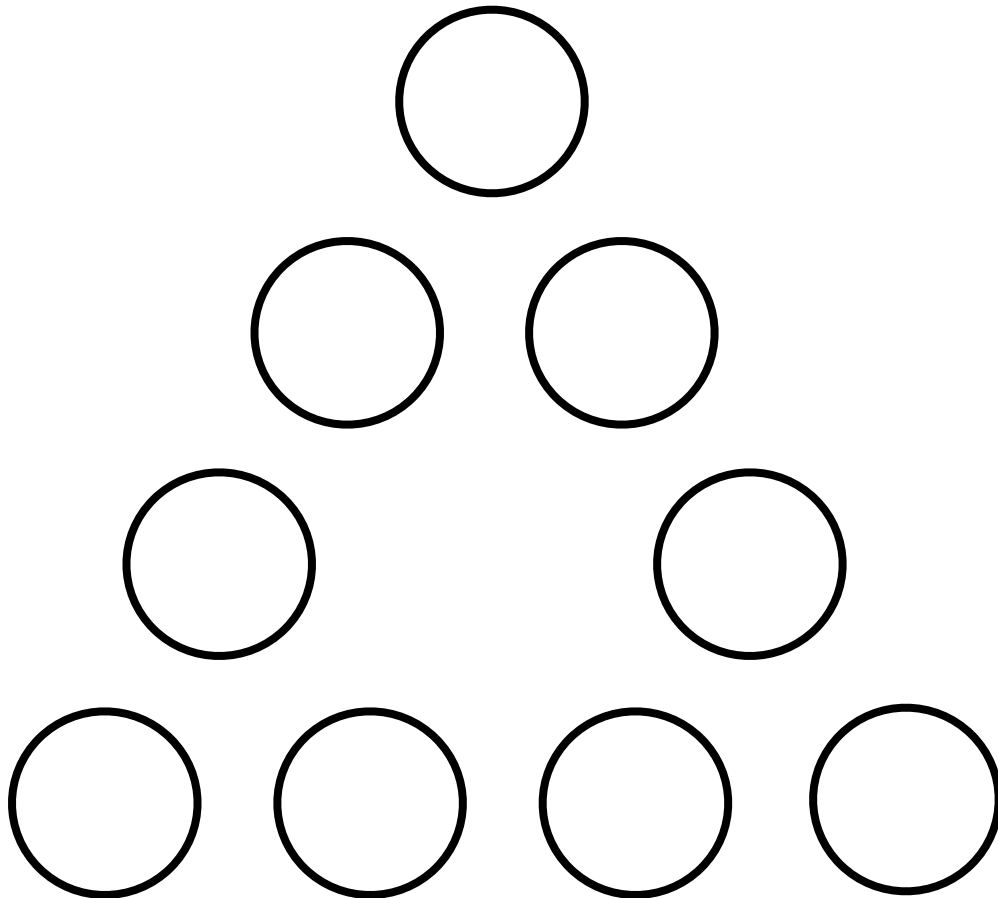
Magic Triangle 4
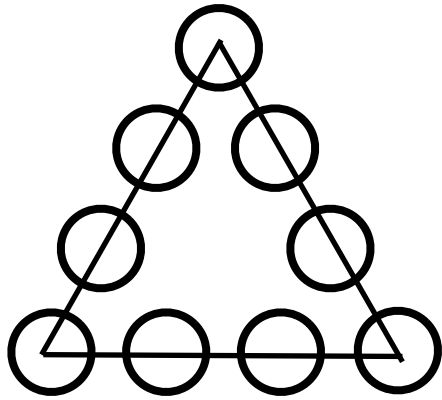
Arrange the numbers 1 to 9

in the triangles
so that the numbers
in each row of 4 triangles
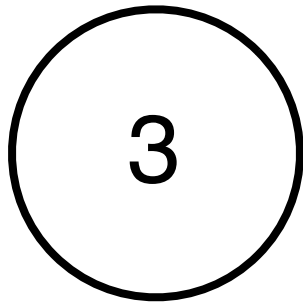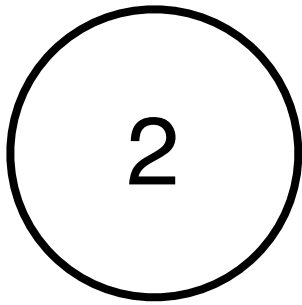
have a Sum of 21

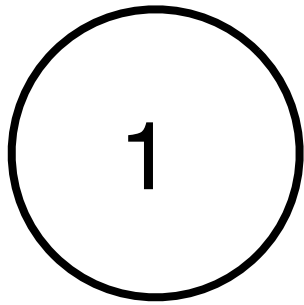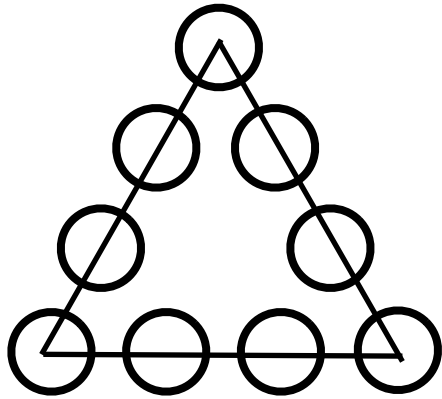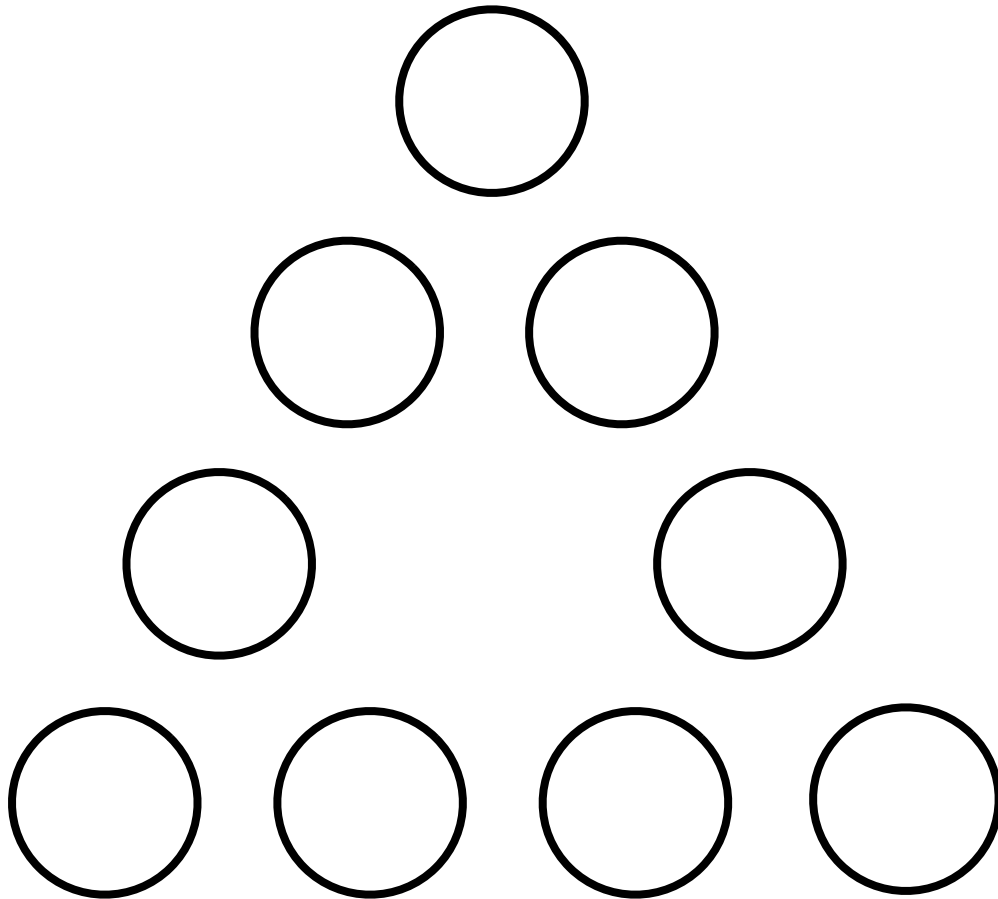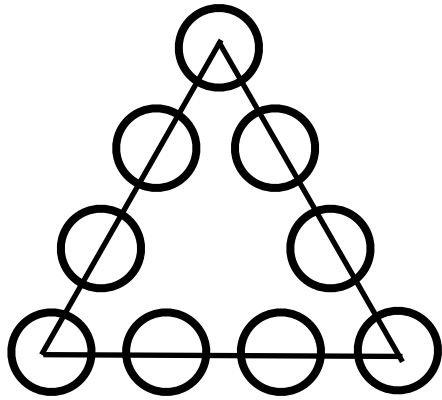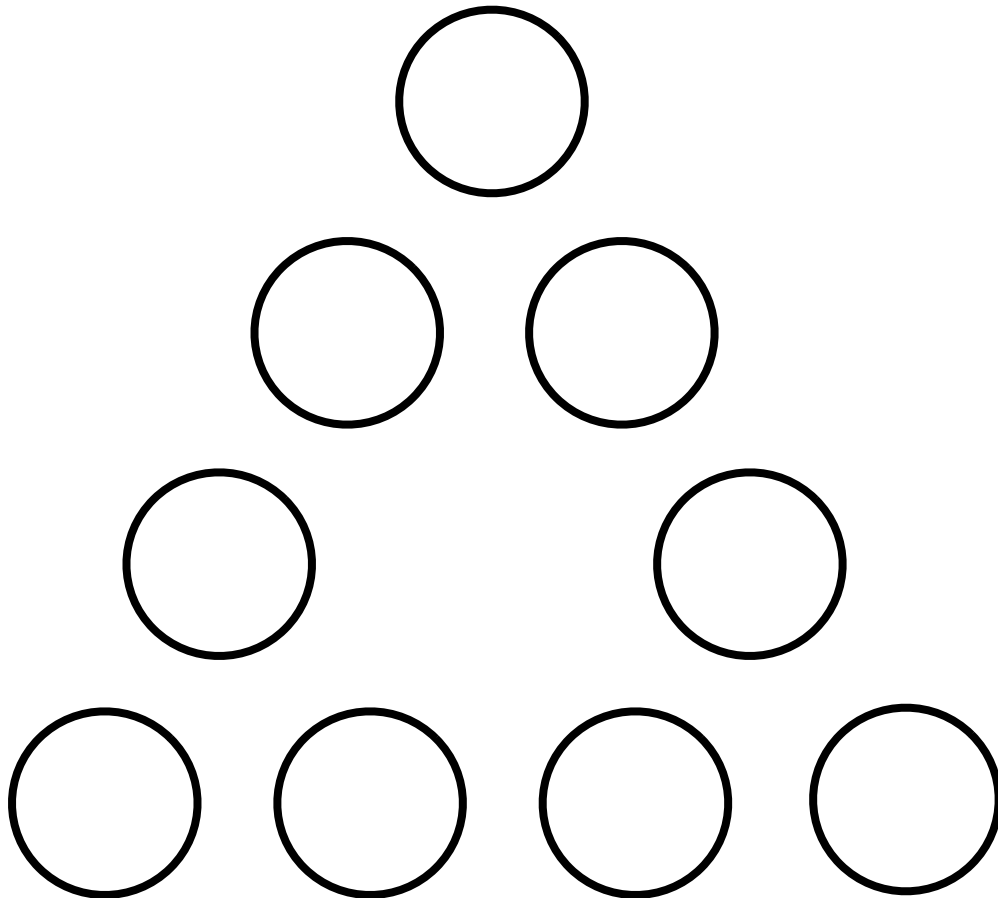# Magic Triangle 5
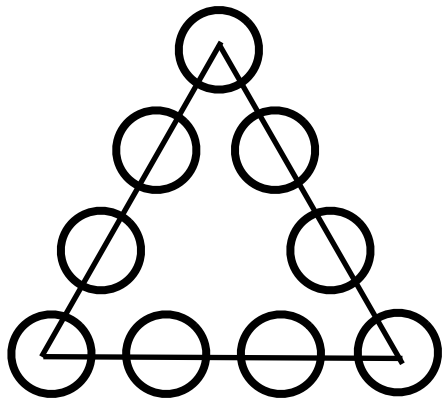
Arrange the numbers 1 to 9

in the triangles
so that the numbers
in each row of 4 triangles

have a Sum of 23
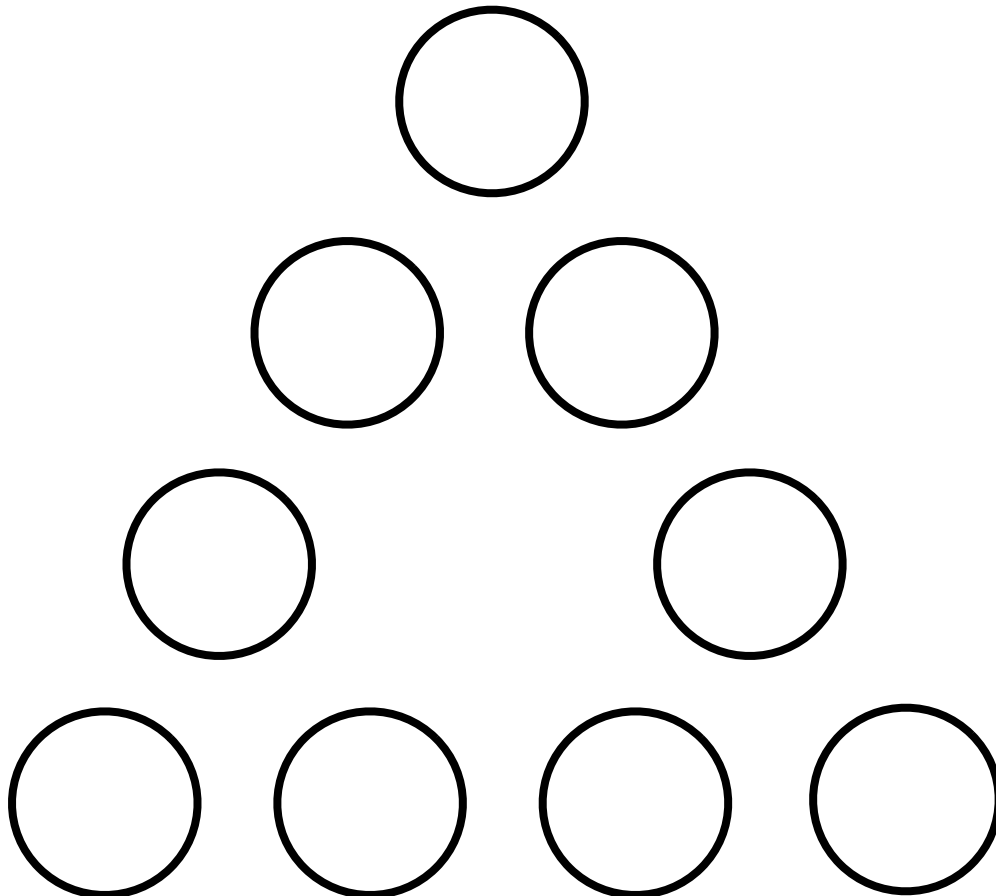
Magic Triangle 1 solutions
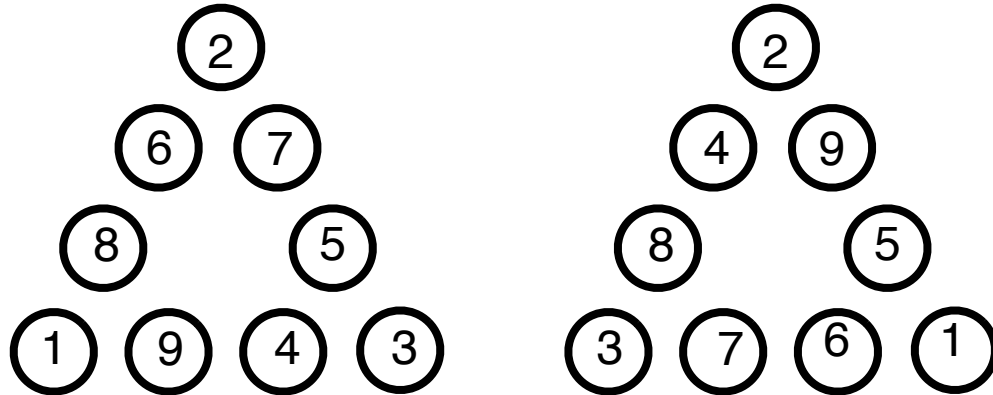
Each group of four numbers makes up a side of the triangle. The numbers that are at the ends and bolded go in the vertex. Within a side you can switch the other 2 numbers that aren't on a vertex, but that doesn't produce any new solutions.

17 = **1** + 5 + 9 + **2** = **2** + 4 + 8 + **3** = **3** + 6 + 7 + **1**

17 = **1** + 6 + 8 + **2** = **2** + 5 + 7 + **3** = **3** + 4 + 9 + **1**

Magic Triangle 2 solutions

Triangle 1:
```
        4
      2   9
    6       5
  7   3   8   1
```

Triangle 2:
```
        7
      5   2
    3       9
  4   6   8   1
```

Triangle 3:
```
        2
      6   5
    4       9
  7   8   1   3
```

Triangle 4:
```
        2
      6   9
    8       1
  3   4   5   7
```

Each group of four numbers makes up a side of the triangle. The numbers that are at the ends and bolded go in the vertex. Within a side you can switch the other 2 numbers that aren't on a vertex, but that doesn't give any new solutions.

$19 = \mathbf{1} + 5 + 9 + \mathbf{4} = \mathbf{4} + 2 + 6 + \mathbf{7} = \mathbf{7} + 3 + 8 + \mathbf{1}$

$19 = \mathbf{1} + 6 + 8 + \mathbf{4} = \mathbf{4} + 3 + 5 + \mathbf{7} = \mathbf{7} + 2 + 9 + \mathbf{1}$

$19 = \mathbf{2} + 5 + 9 + \mathbf{3} = \mathbf{3} + 1 + 8 + \mathbf{7} = \mathbf{7} + 4 + 6 + \mathbf{2}$

$19 = \mathbf{2} + 6 + 8 + \mathbf{3} = \mathbf{3} + 4 + 5 + \mathbf{7} = \mathbf{7} + 1 + 9 + \mathbf{2}$
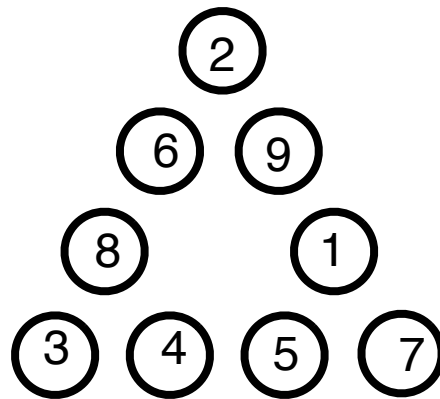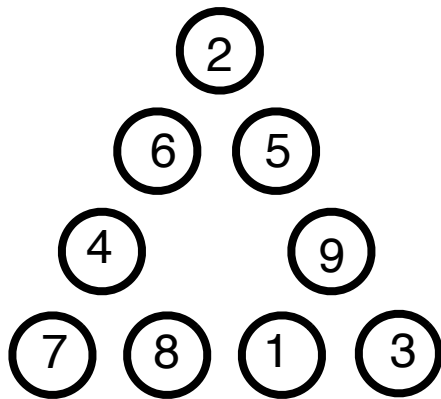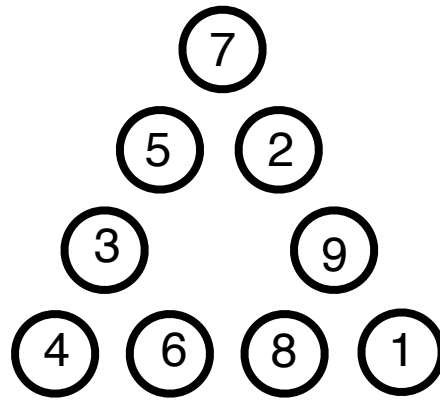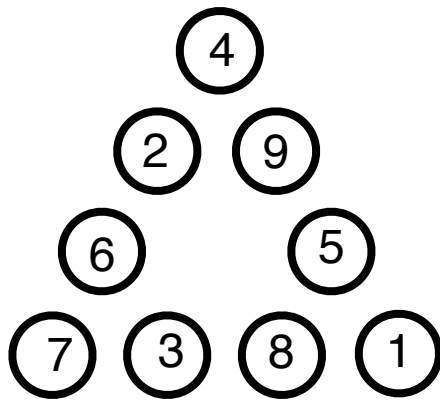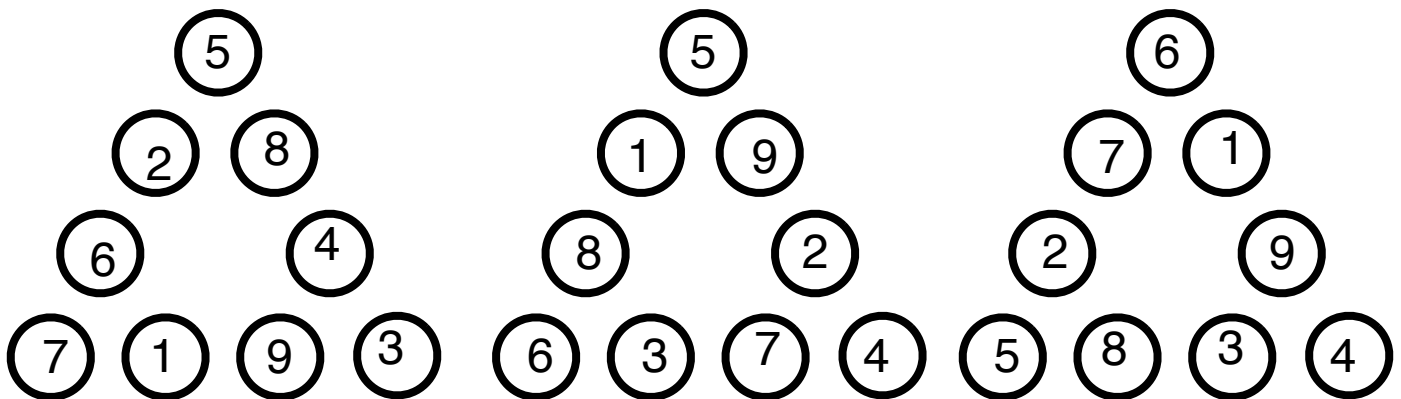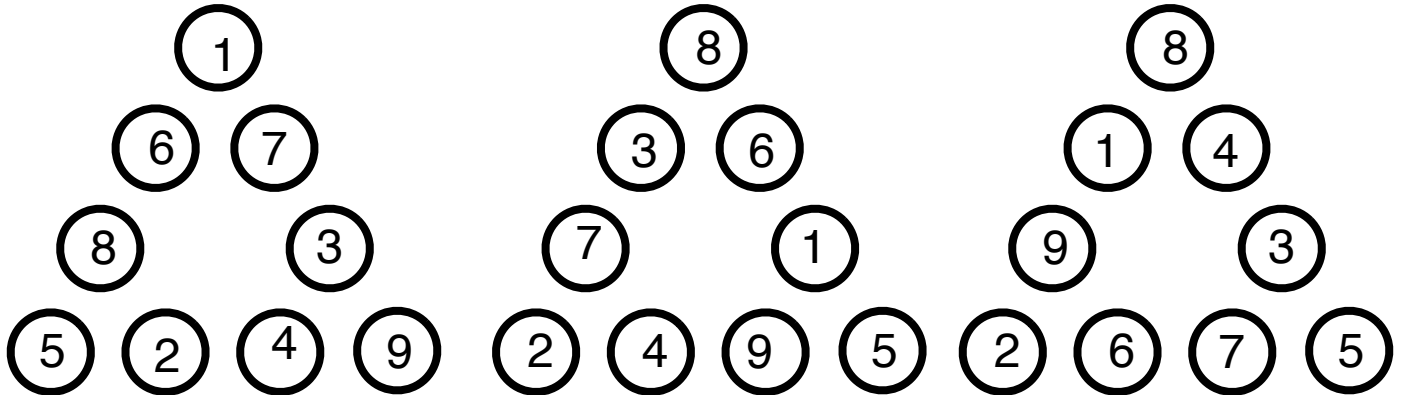
Magic Triangle 3 solutions

Each group of four numbers makes up a side of the triangle. The numbers that are at the ends and bolded go in the vertex. Within a side you can switch the other 2 numbers that aren't on a vertex, but that doesn't give any new solutions.

$$20 = \mathbf{1} + 6 + 8 + \mathbf{5} = \mathbf{5} + 2 + 4 + \mathbf{9} = \mathbf{9} + 3 + 7 + \mathbf{1}$$

$$20 = \mathbf{2} + 4 + 9 + \mathbf{5} = \mathbf{5} + 1 + 6 + \mathbf{8} = \mathbf{8} + 3 + 7 + \mathbf{2}$$

$$20 = \mathbf{2} + 6 + 7 + \mathbf{5} = \mathbf{5} + 3 + 4 + \mathbf{8} = \mathbf{8} + 1 + 9 + \mathbf{2}$$
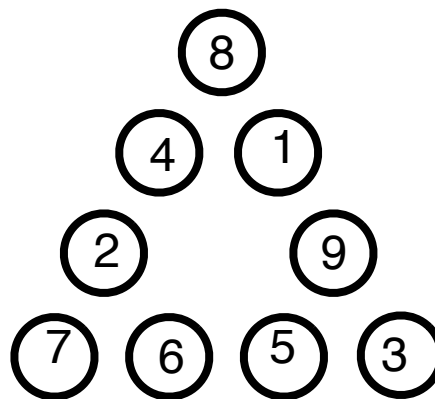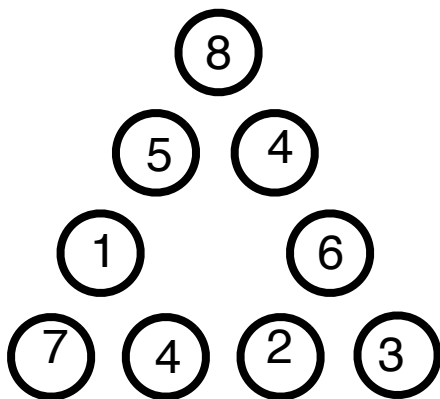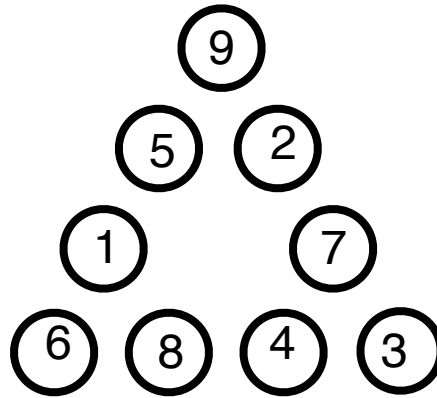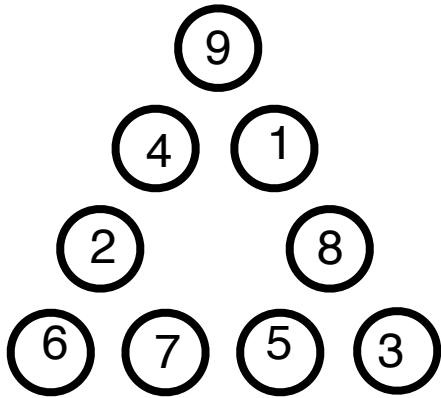
$$20 = \mathbf{3} + 4 + 8 + \mathbf{5} = \mathbf{5} + 2 + 6 + \mathbf{7} = \mathbf{7} + 1 + 9 + \mathbf{3}$$

$$20 = \mathbf{4} + 2 + 9 + \mathbf{5} = \mathbf{5} + 1 + 8 + \mathbf{6} = \mathbf{6} + 3 + 7 + \mathbf{4}$$

$$20 = \mathbf{4} + 3 + 8 + \mathbf{5} = \mathbf{5} + 2 + 7 + \mathbf{6} = \mathbf{6} + 1 + 9 + \mathbf{4}$$

Magic Triangle 4 solutions

Each group of four numbers makes up a side of the triangle. The numbers that are at the ends and bolded go in the vertex. Within a side you can switch the other 2 numbers that aren't on a vertex, but that doesn't give any new solutions.

$$21 = \mathbf{3} + 5 + 7 + \mathbf{6} = \mathbf{6} + 2 + 4 + \mathbf{9} = \mathbf{9} + 1 + 8 + \mathbf{3}$$
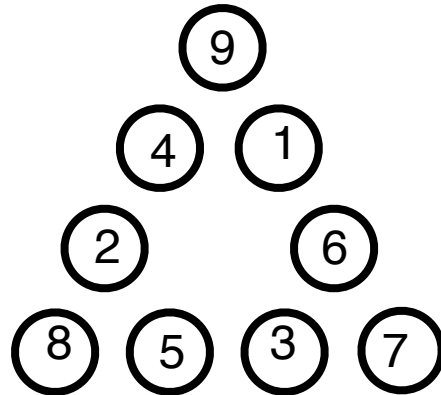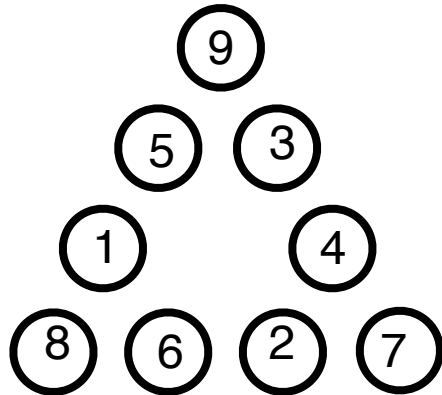
$$21 = \mathbf{3} + 4 + 8 + \mathbf{6} = \mathbf{6} + 1 + 5 + \mathbf{9} = \mathbf{9} + 2 + 7 + \mathbf{3}$$

$$21 = \mathbf{3} + 2 + 9 + \mathbf{7} = \mathbf{7} + 1 + 5 + \mathbf{8} = \mathbf{8} + 4 + 6 + \mathbf{3}$$

$$21 = \mathbf{3} + 5 + 6 + \mathbf{7} = \mathbf{7} + 2 + 4 + \mathbf{8} = \mathbf{8} + 1 + 9 + \mathbf{3}$$

Magic Triangle 5 solutions

Each group of four numbers makes up a side of the triangle. The numbers that are at the ends and bolded go in the vertex. Within a side you can switch the other 2 numbers that aren't on a vertex, but that doesn't give any new solutions.

$23 = \mathbf{7} + 2 + 6 + \mathbf{8} = \mathbf{8} + 1 + 5 + \mathbf{9} = \mathbf{9} + 3 + 4 + \mathbf{7}$

$23 = \mathbf{7} + 3 + 5 + \mathbf{8} = \mathbf{8} + 2 + 4 + \mathbf{9} = \mathbf{9} + 1 + 6 + \mathbf{7}$