



PREVIEW

This contains
only 24 slides.

Complete slideshow
will be shown only at
the workshop.

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conduct workshops in your school.*

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MATHEMAGIC

A
WORKSHOP
for
**Magically-Minded
Mathematicians!**



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World of **Mathematics**
is mysterious!



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WHY MAGIC TRICKS

- A magic trick provides the interest, and its explanation the demonstration of the power of mathematics to provide answers
- This helps to make Maths fun for us



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We are sure that after this workshop you **ALL will say**

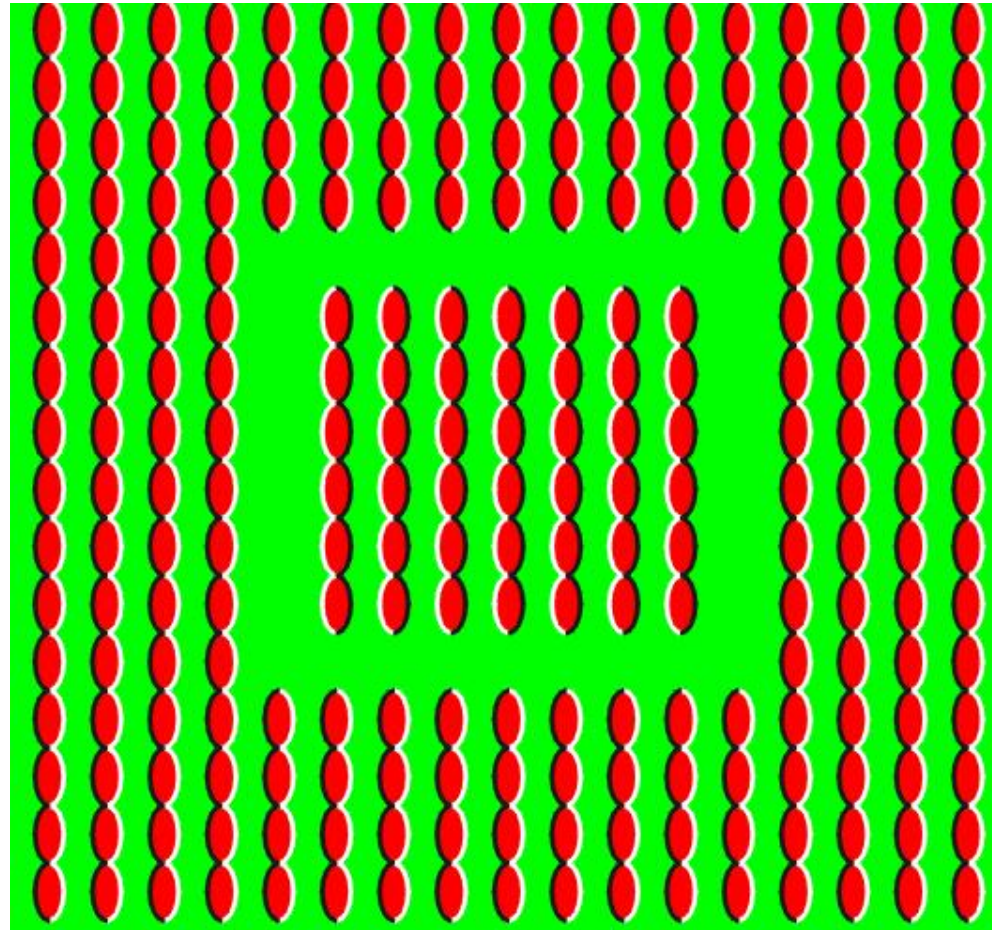
**“Maths is fun
and I like it !”**



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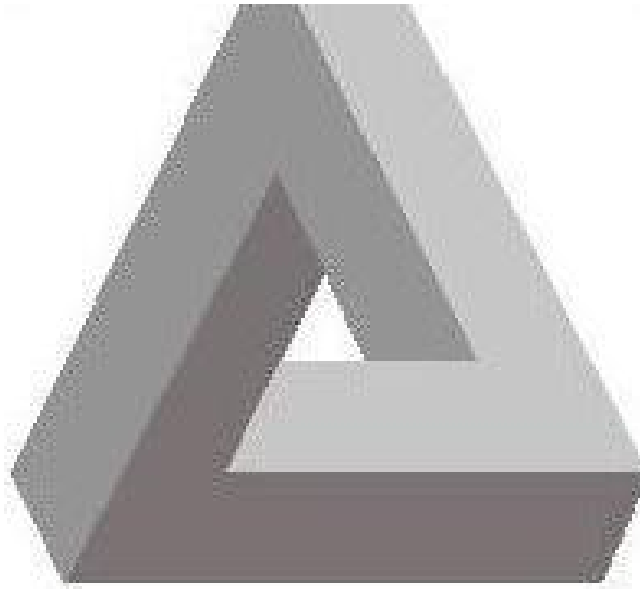
Are they moving?



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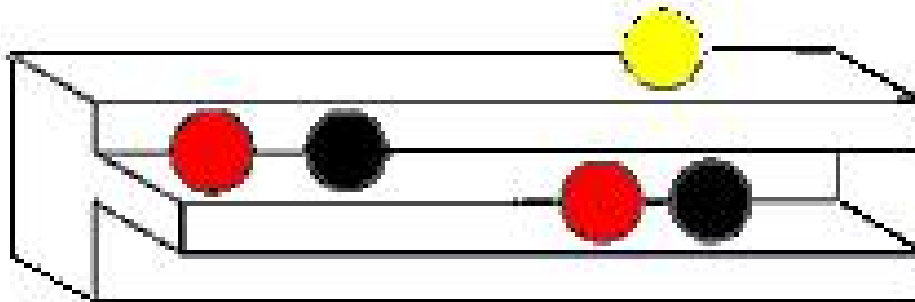
Impossible triangle



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Are the balls inside
or on the shelf?



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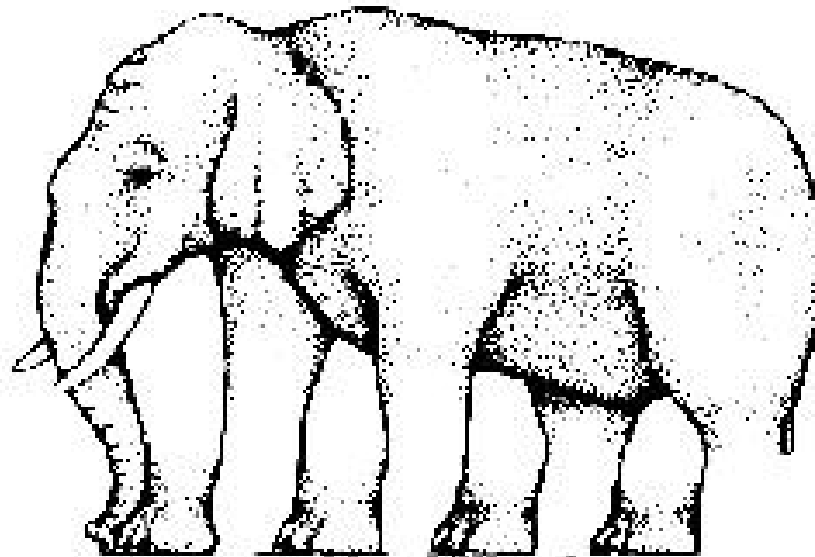
Is it a saxophone player, or a
human face?



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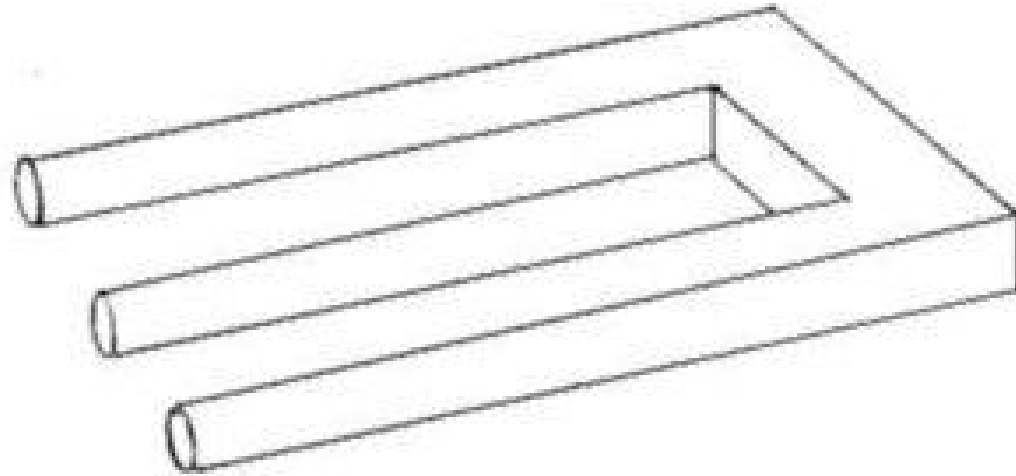
How many legs does
the elephant have?



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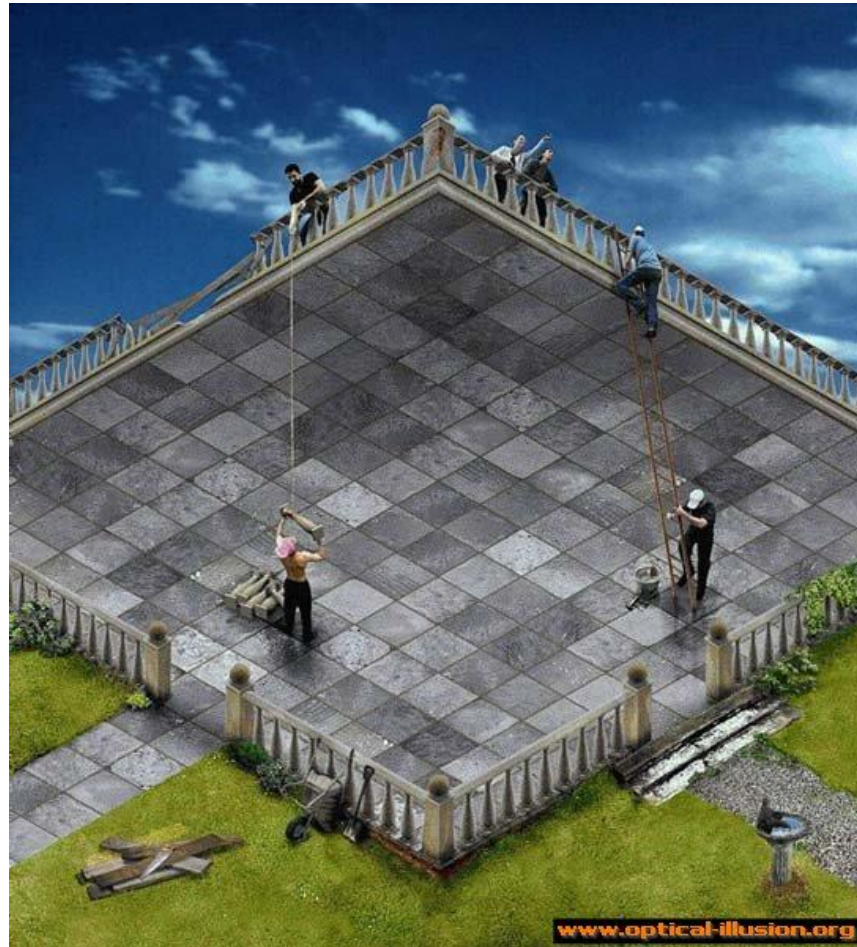
Tried counting the
prongs in the figure?



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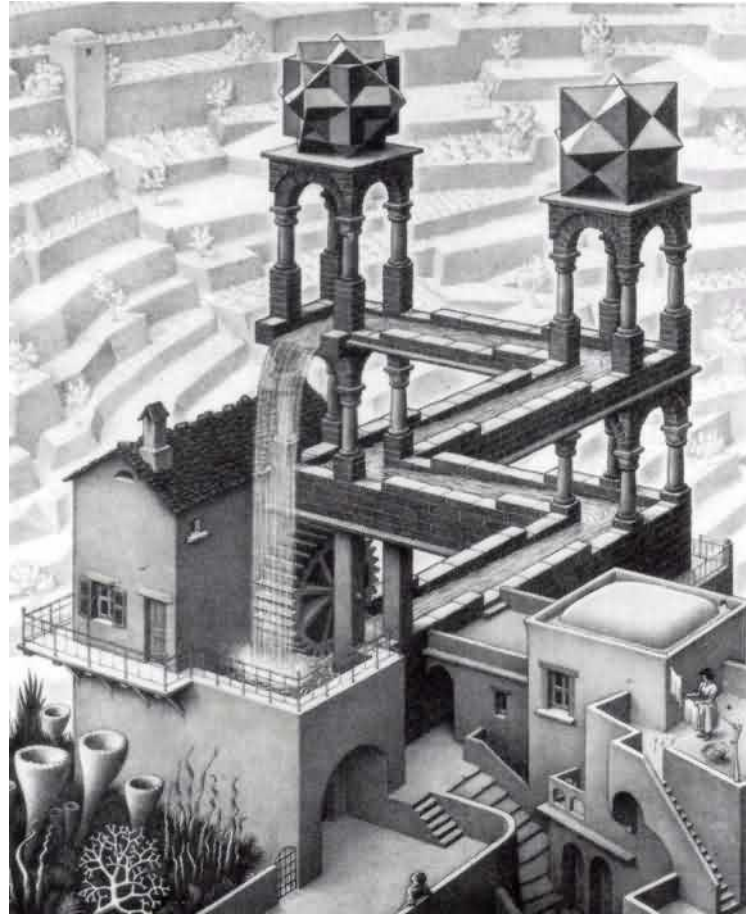
Who is down who is up?



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Is the water flowing upwards?



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MAGIC CLIPS



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Using a paper & 2 clips can you
Link the Paperclips without your
touching them.

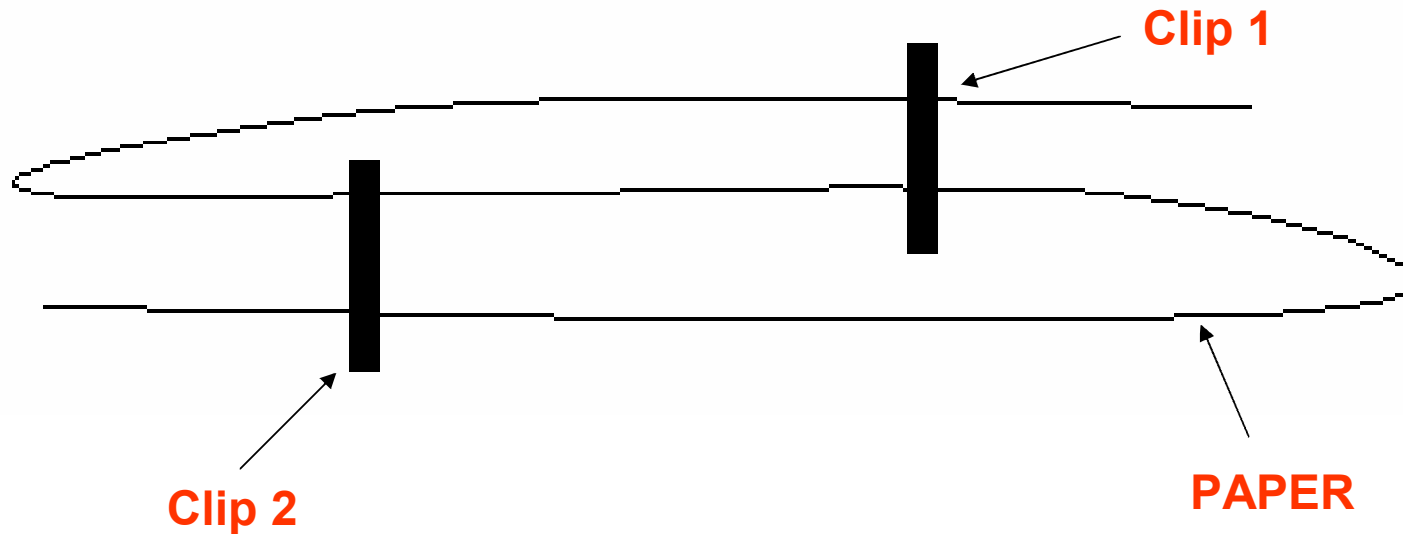
Hint : Use the paper to do it!



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Fold it into a
S-shape as shown



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Magic

The clips are
joined !



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Maths behind *Magie*

- When you pull the paper open **sharply** again, the paper clips fly off and land linked!
- The paperclips are actually **edge-identifiers** on the folded paper surface, and since the edges which have been brought together now overlap, that overlap is transferred to the paperclips when the surface is unfolded again.
- This is Topology .
- Topology is a branch of **Mathematics** that is all to do with surfaces, knots and very hard sums.



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Magic Squares, Any Total

- Name of the student
- Your fathers age (say **N**)



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	1	12	7
11	8		2
5	10	3	
4		6	9

Using the above square, fill numbers in different coloured boxes
 So that
 Each row
 Each column
 Each diagonal
 Adds to N =
YOUR TIME STARTS NOW.....



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Now lets create the Magic

1, 2, 3, 4.....

My magic square is ready!

	1	12	7
11	8		2
5	10	3	
4		6	9



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Some more examples

If $N > 21$

Let N be 70

then

50	1	12	7
11	8	49	2
5	10	3	52
4	51	6	9

If $N < 21$

Let N be 10

then

-10	1	12	7
11	8	-11	2
5	10	3	-8
4	-9	6	9



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Maths behind the *Magic*

N-20	1	12	7
11	8	N-21	2
5	10	3	N-18
4	N-19	6	9



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Quiz Question 1

- Can you tell us the detailed maths behind the magic squares



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