

Games that Develop Young Children's Reasoning with Geometry and Numbers

Presented by Polina Sabinin

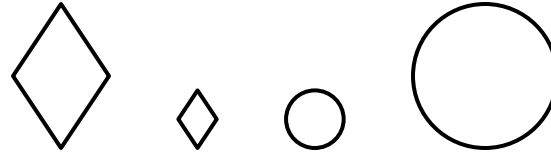
at the 2007 ATMNE Conference

in Springfield, MA

on November 8, 2007

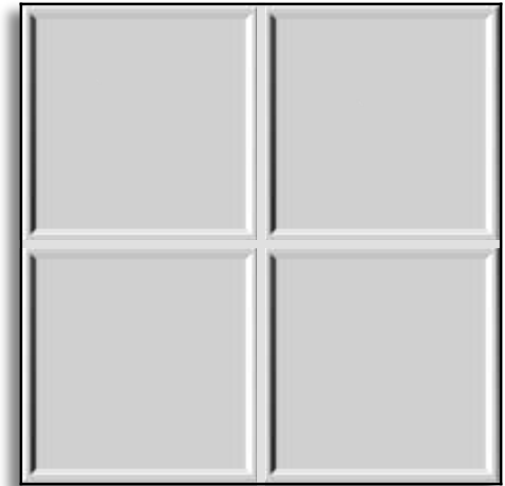
Let's warm up a little:

Put the shapes below in each of the grids. Follow the clues carefully.



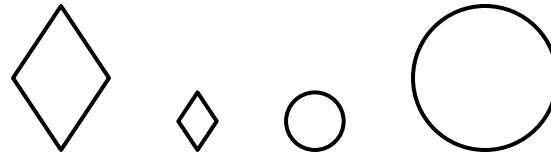
Clues:

- A. The large shapes are in the top row.
- B. The circles are on the right.



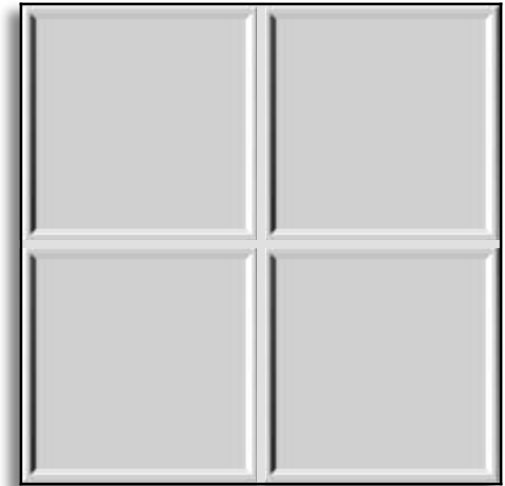
Warm up 2:

Put the shapes below in each of the grids. Follow the clues carefully.



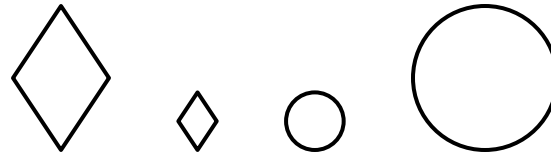
Clues:

- A. There are no diamonds in the top row.
- B. All the small shapes are on the left.



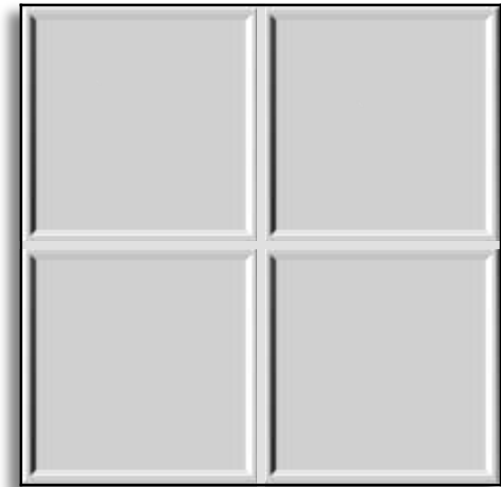
Warm up 3:

Put the shapes below in each of the grids. Follow the clues carefully.



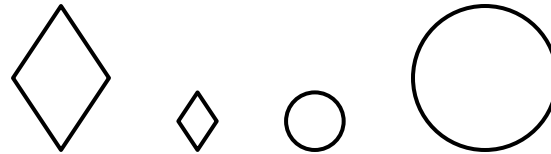
Clues:

- A. The small circle is in the top row.
- B. The large shapes are on the right.



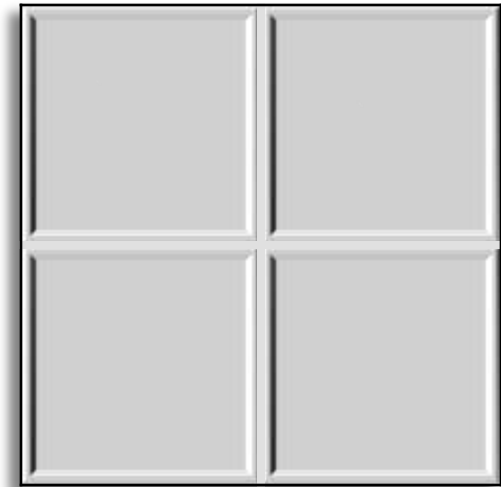
Warm up 4:

Put the shapes below in each of the grids. Follow the clues carefully.



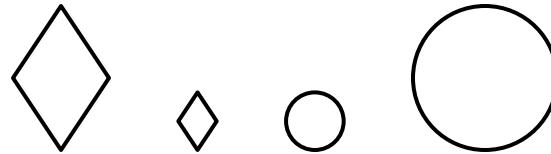
Clues:

- A. The circles are not in the top row.
- B. The small circle is on the left.



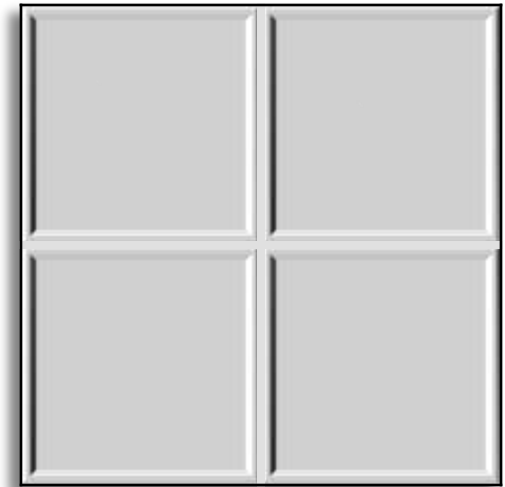
Last one:

Placez les pièces dans the cadre ci-dessous . Suivez les indices.



Indices:

- A. Les carreaux ne sont pas en bas.
- B. Le petit carreau est à gauche.

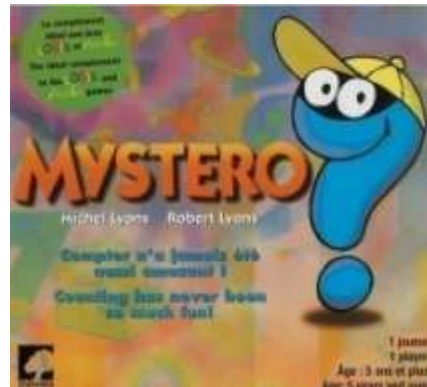


About the activities

- Deductive reasoning, Problem Solving & Proof
 - Negation
 - Conditional statements
 - Relative statements
- Flexibility
 - Individual, group, or class activities
 - Offer full range of difficulty (Pre-K – Mensa)
 - Extensions
- Mathematical communication
 - Alingual entry - ELL
 - From visual clues to mathematical terminology
 - Build verbal reasoning & proof skills
- Clear feedback
 - Self-pacing
 - Promotes independence

Today's play list:

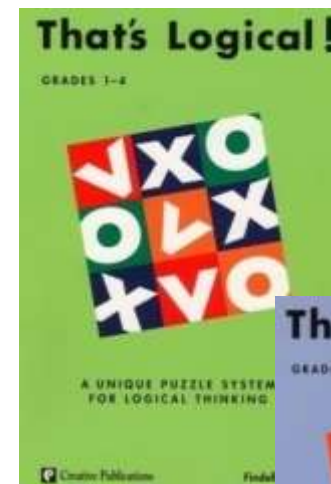
- Mystero



- Meta-Forms & Logix

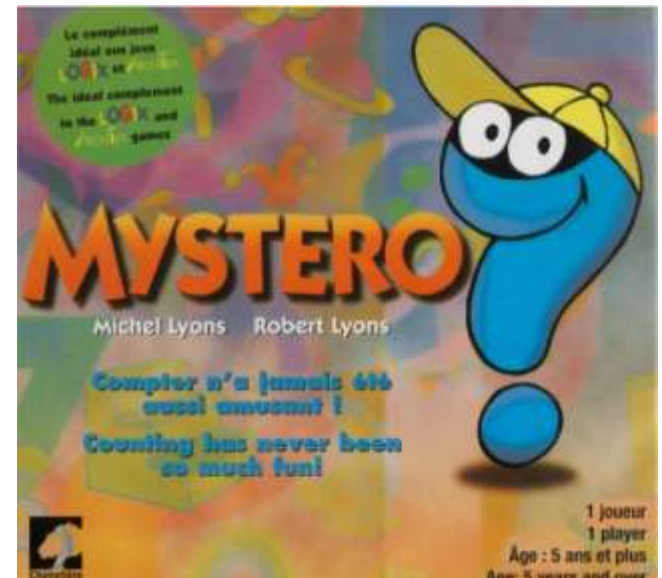


- That's Logical!
a.k.a. Sigmund



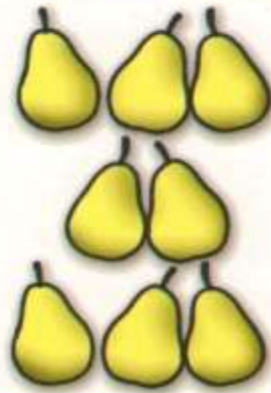
Mystero

- Designed by Robert & Michel Lyons
- Part of *Defi Mathematique* (Challenging Mathematics) curriculum
 - French speaking Canada
 - Grades 1 – 6
- Published by Cheneliere/McGraw-Hill



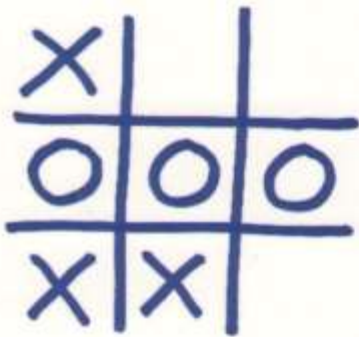


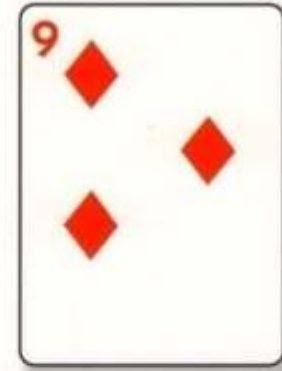
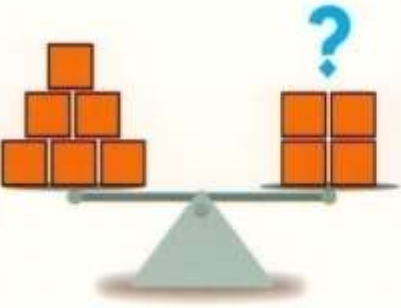
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3

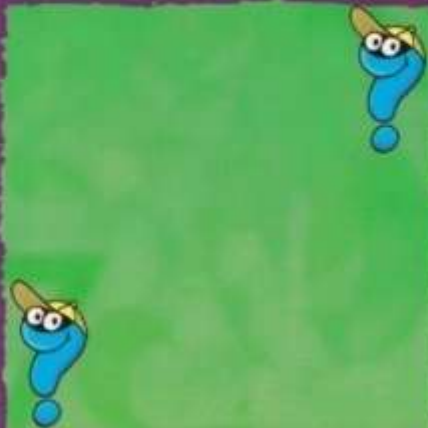


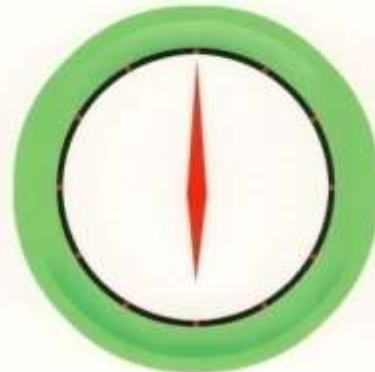
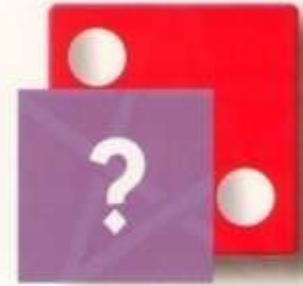


E



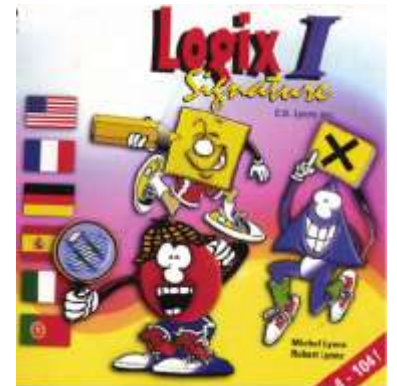
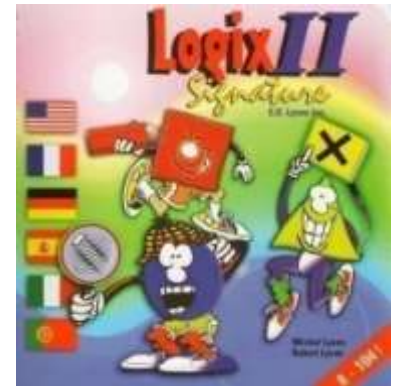
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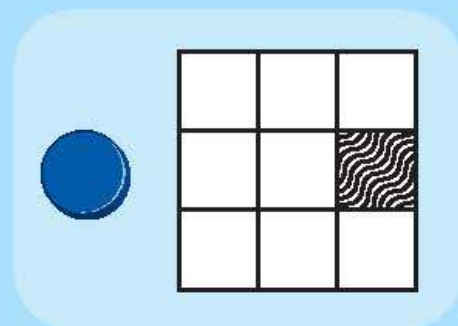
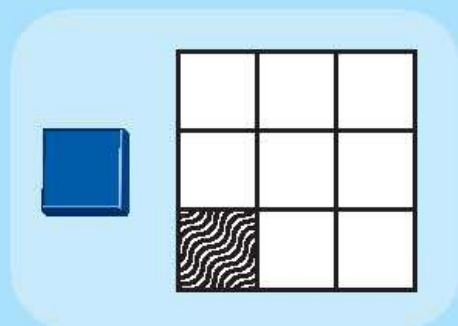
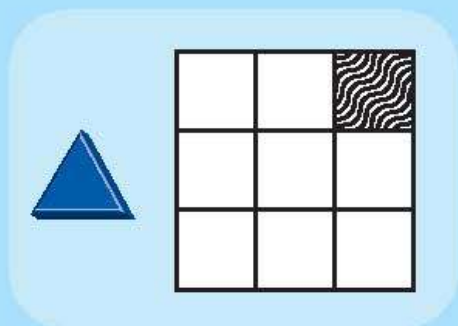
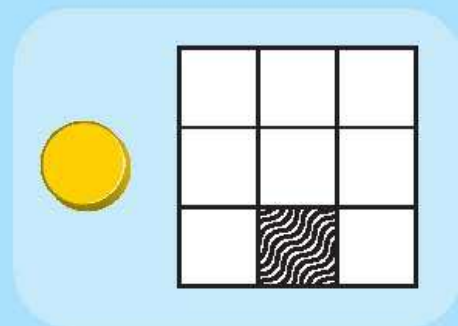
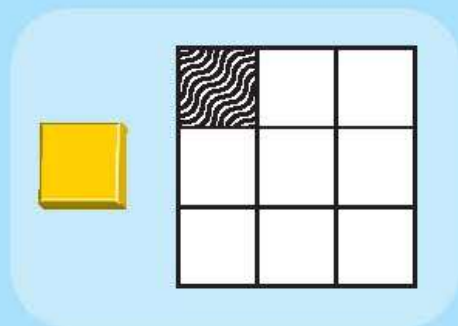
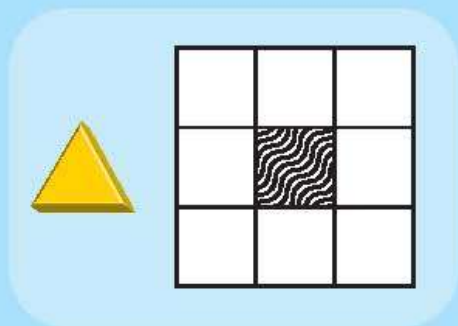
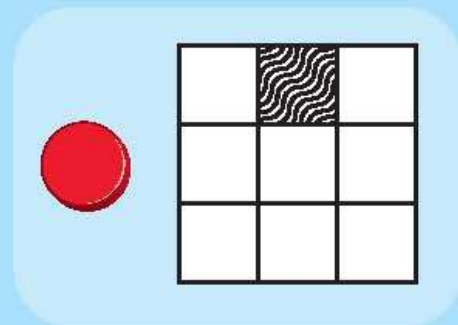
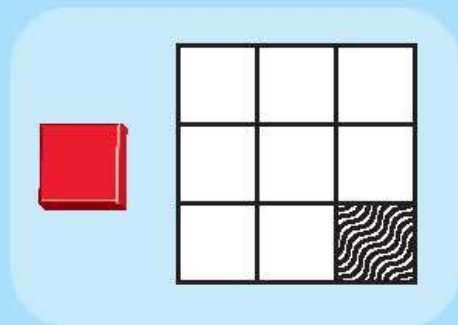
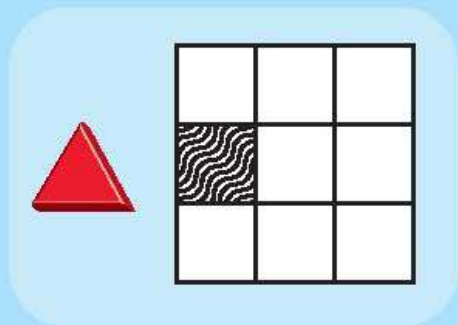




Meta-Forms, Logix I & Logix II

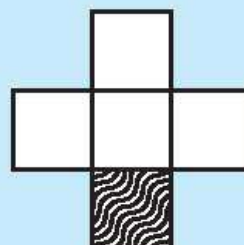
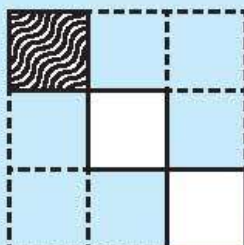
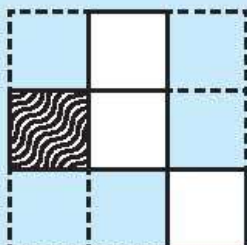
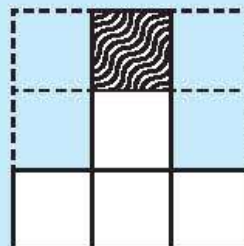
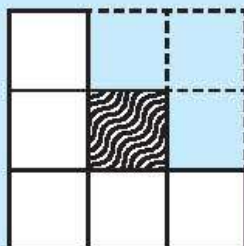
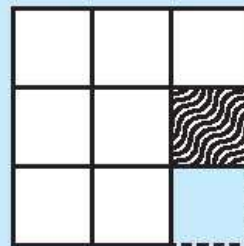
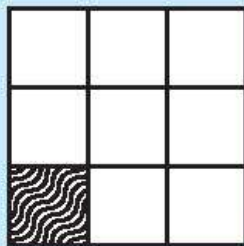
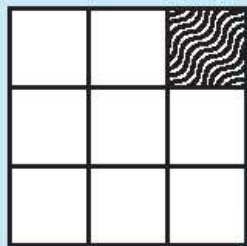
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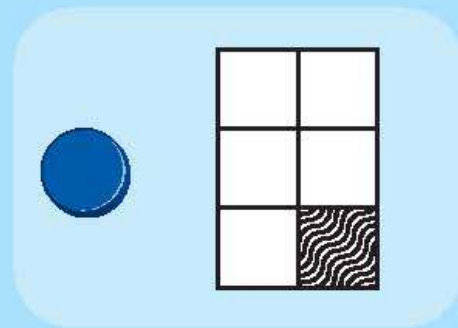
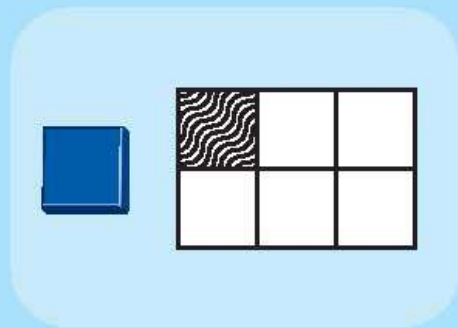
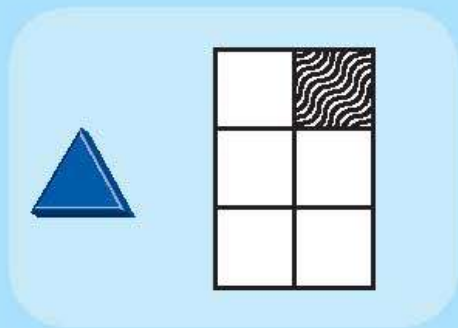
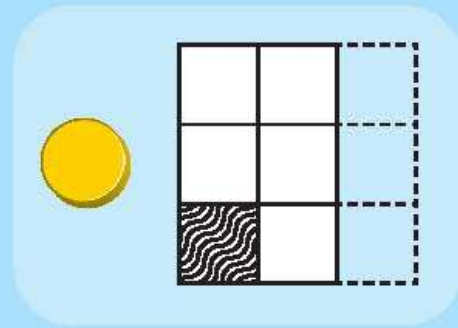
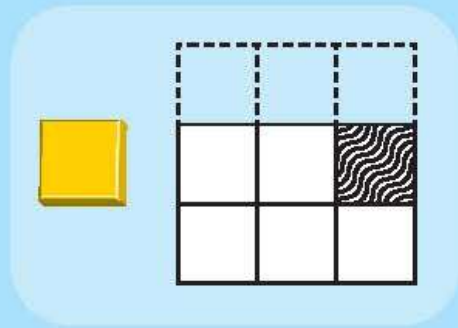
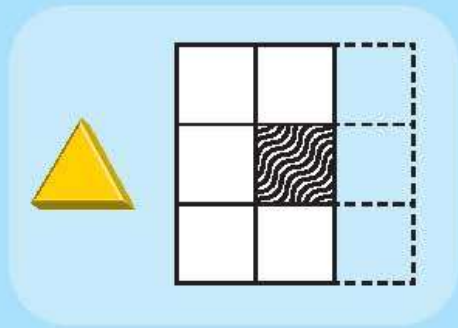
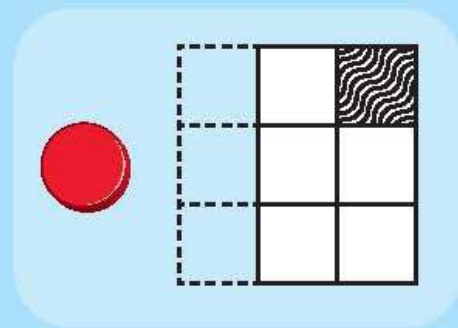
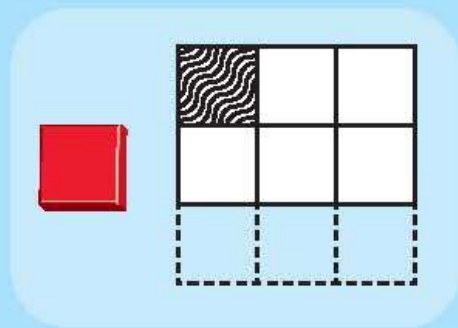
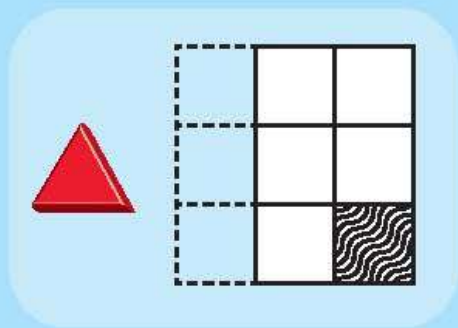


01



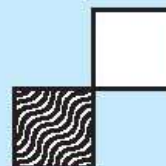
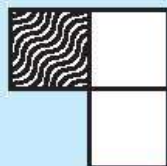
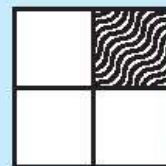
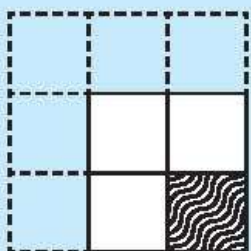
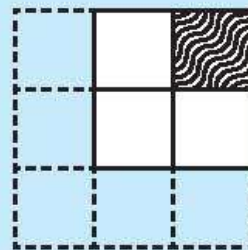
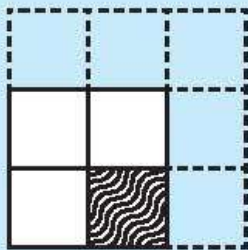
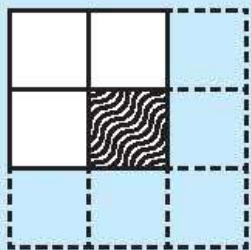


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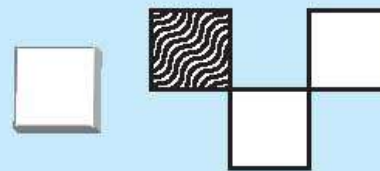
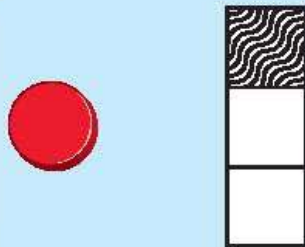
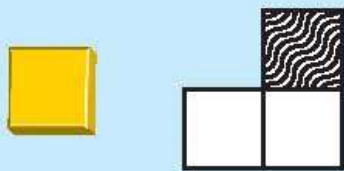
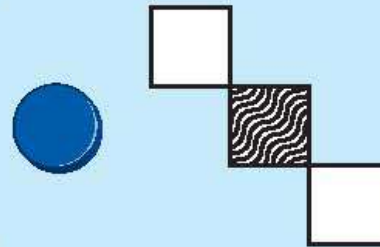
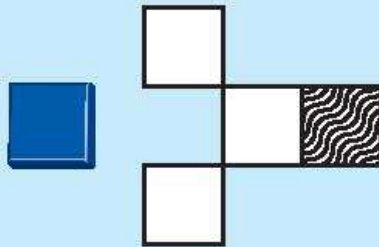
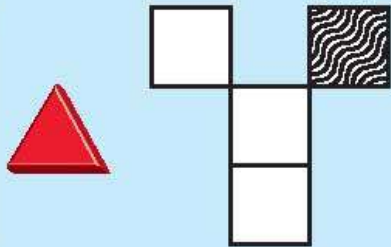


07

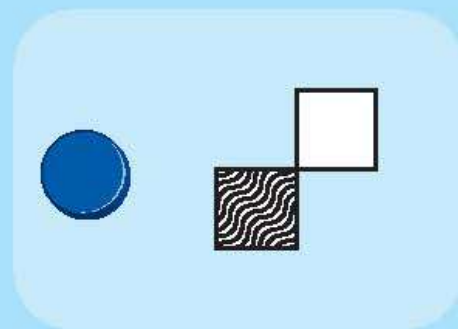
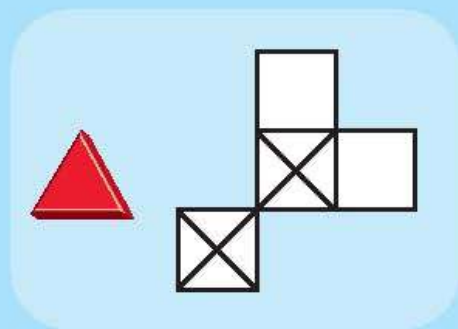
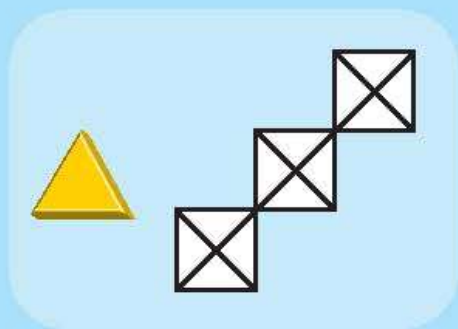
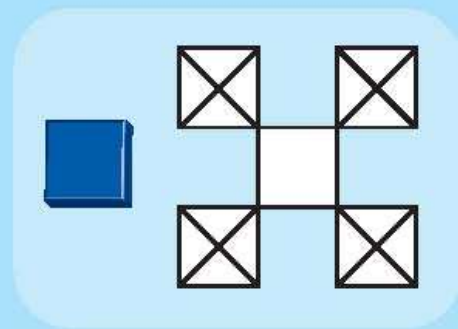
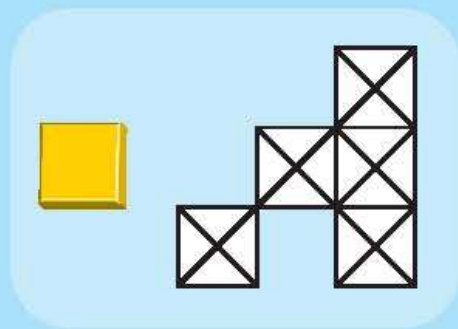
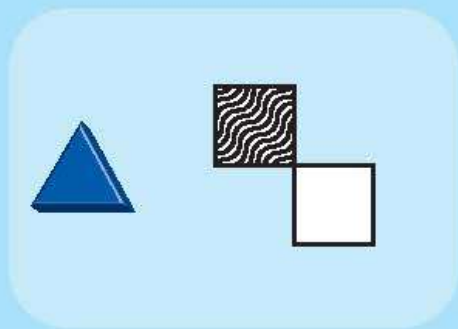
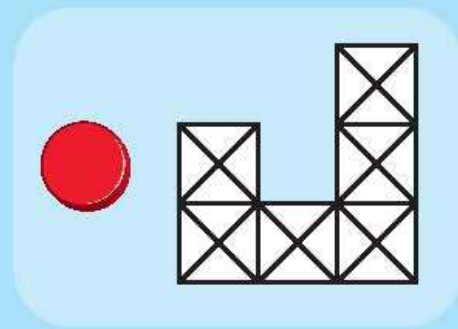
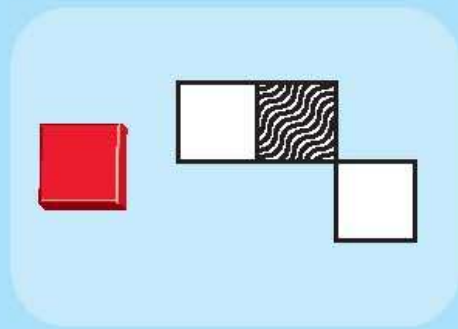
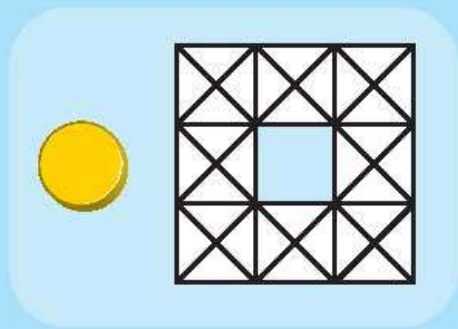


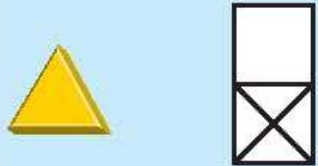
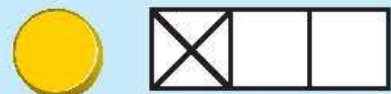
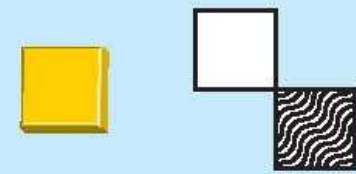
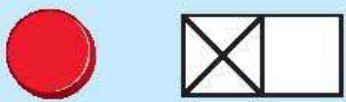
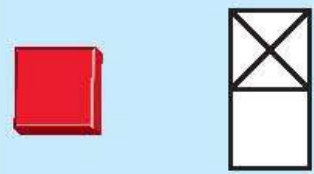
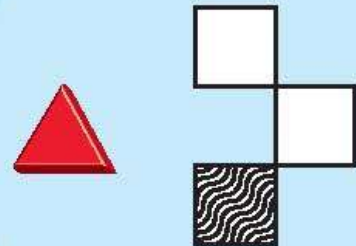
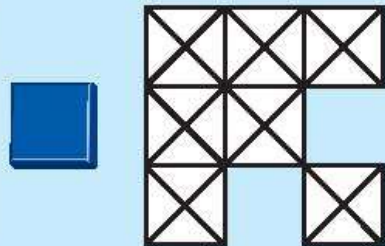
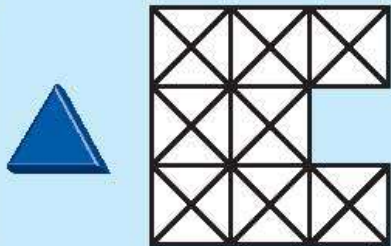


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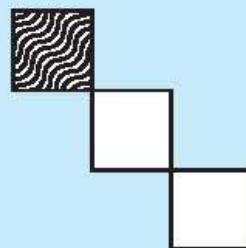
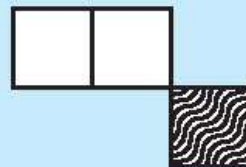
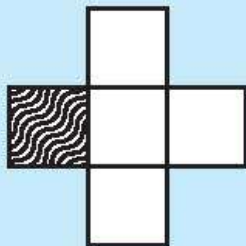
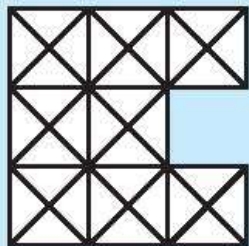
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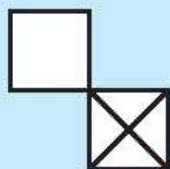
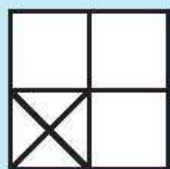


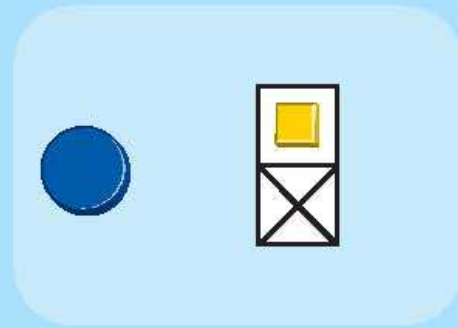
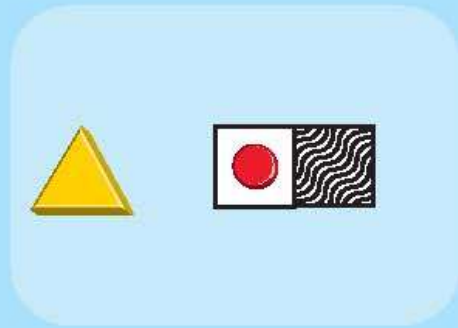
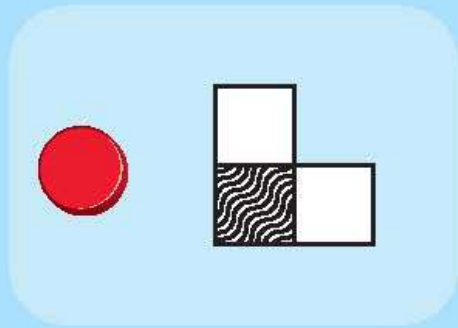
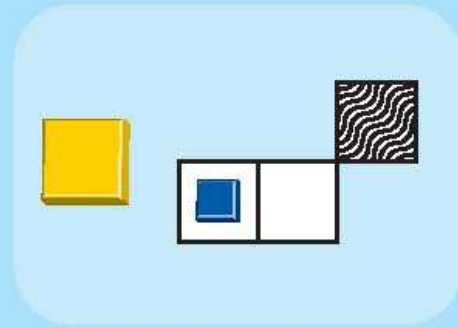
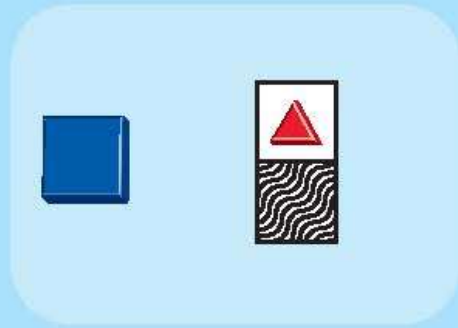
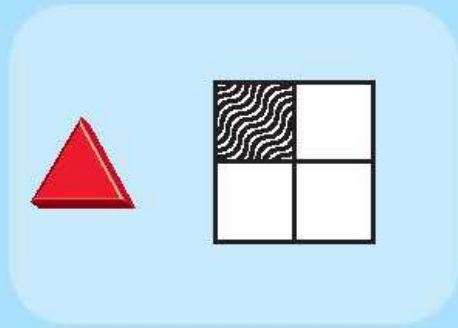
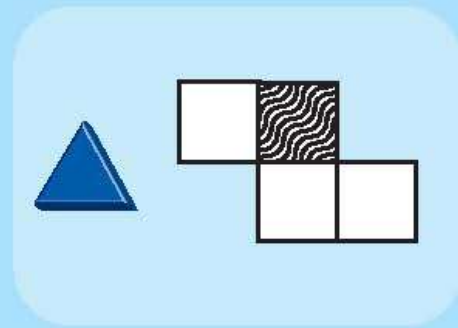
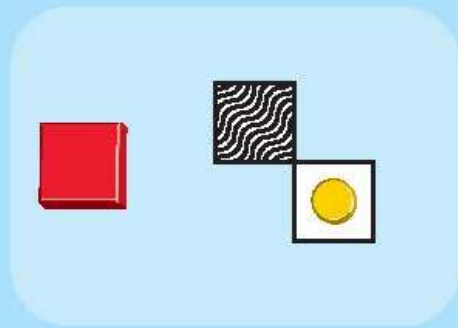
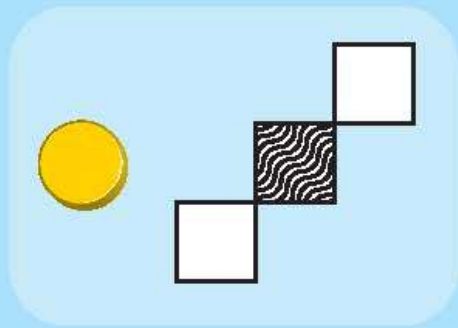
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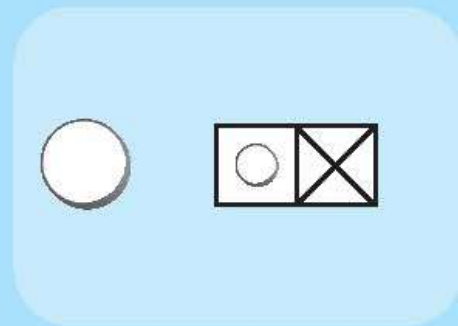
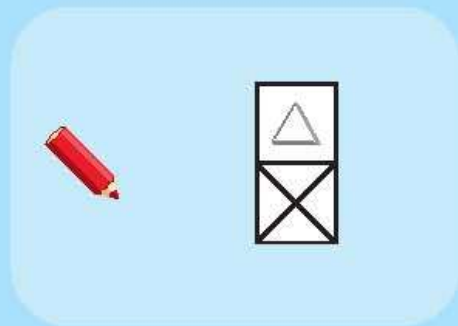
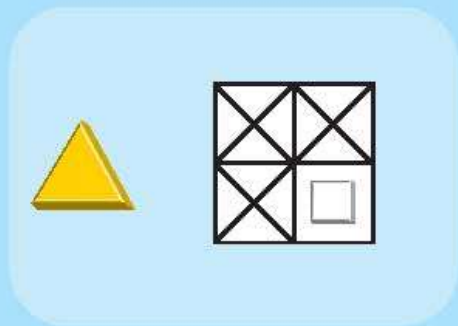
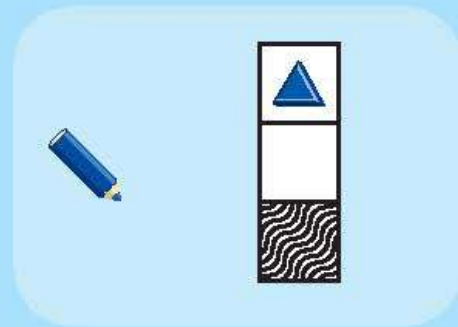
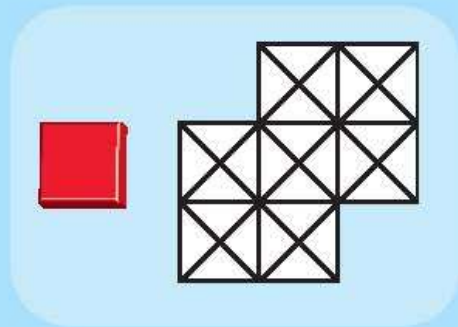
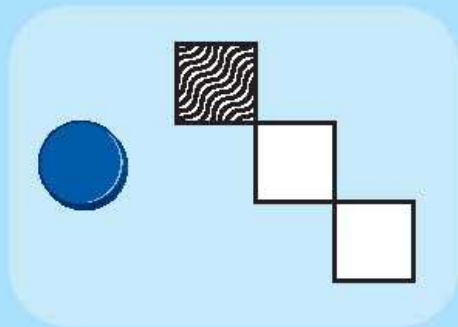
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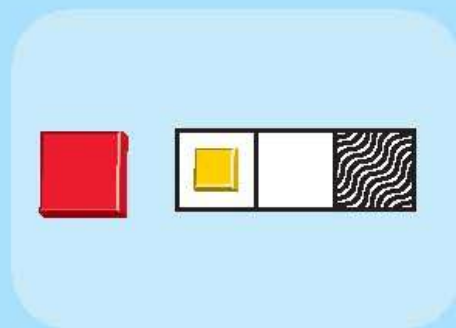
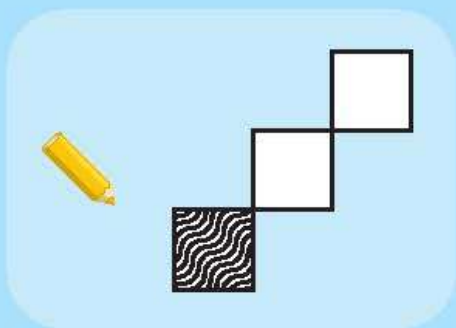
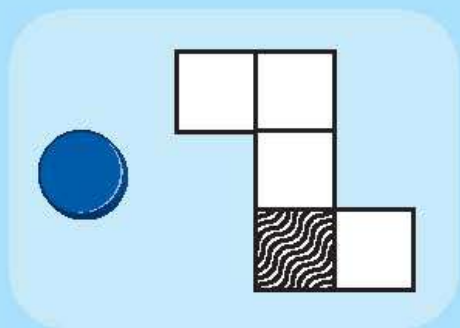
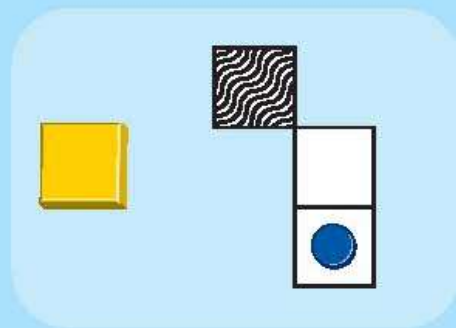
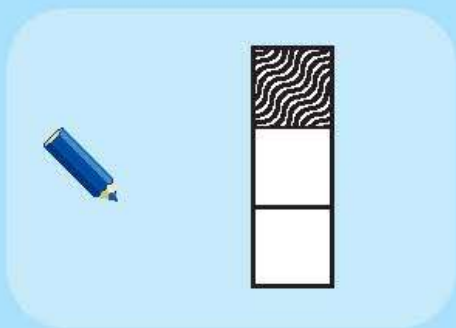
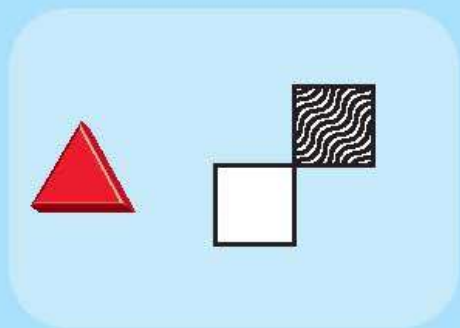
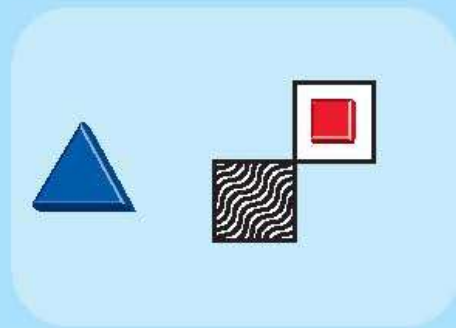
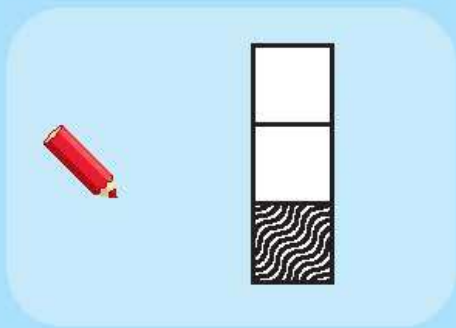
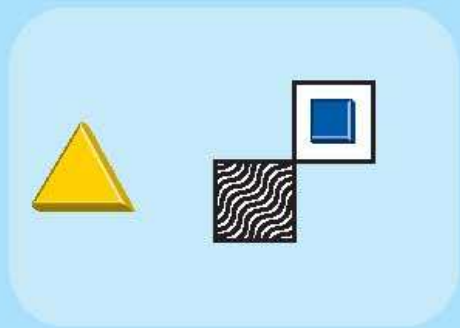
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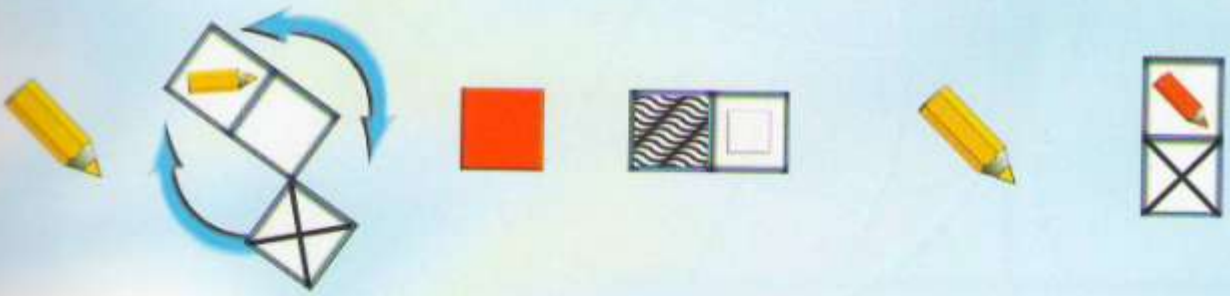
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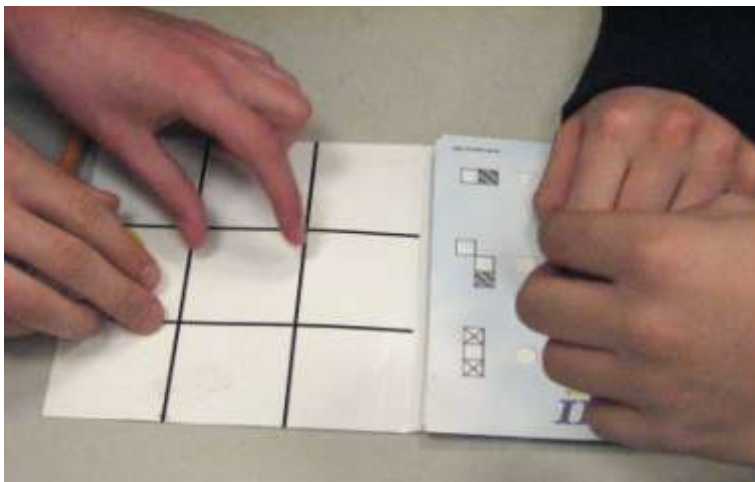


Logix II

Signature

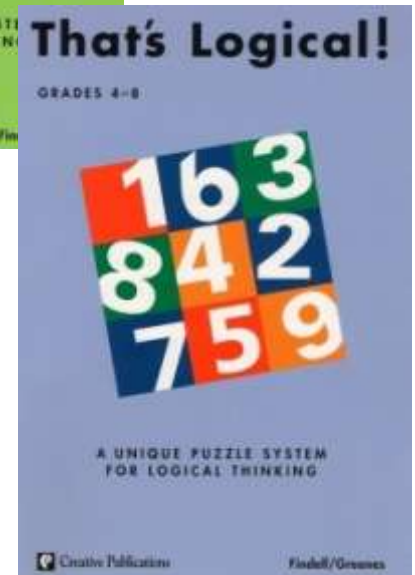
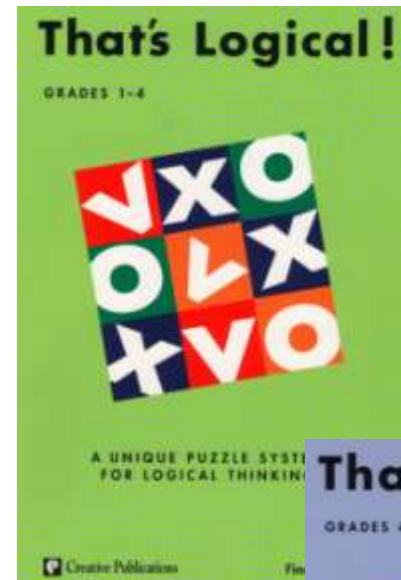


In the classroom



That's Logical! a.k.a. Sigmund

- Developed by
Drs. Carole Greenes
& Carol Findell
 - Book 1: Grades 1 - 4
 - Book 2: Grades 4 - 8
- Inspired by Logix
- Published by
Creative
Publications

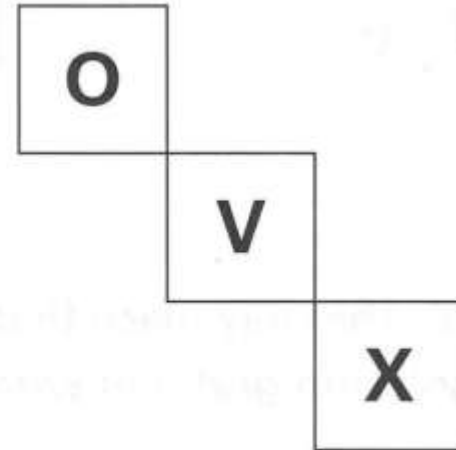
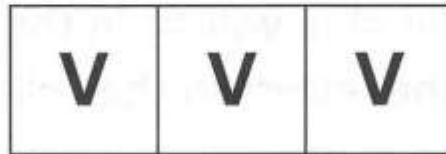
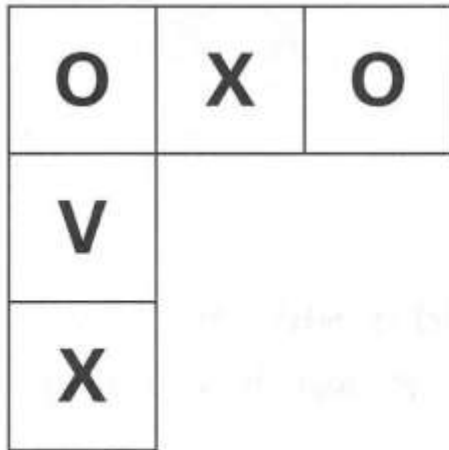


That's Logical! (1-4) *1

Use the clues to figure out where to put the 9 letters.

X X X V V V O O O

Clues

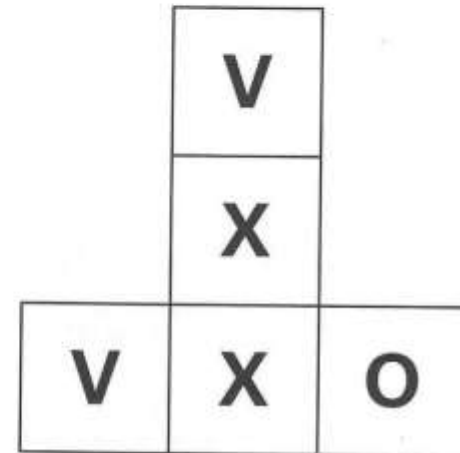
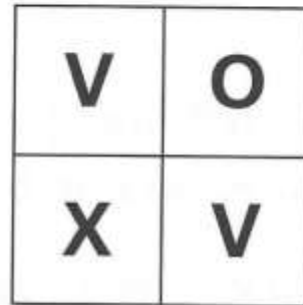
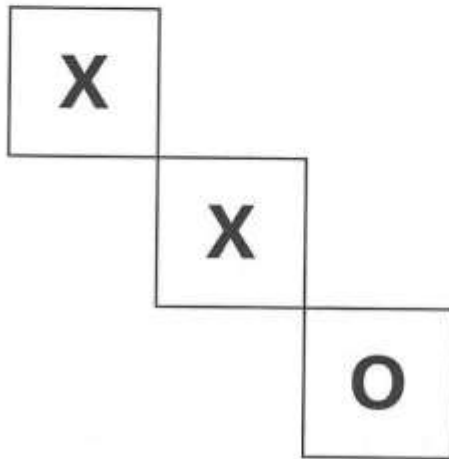


That's Logical! (1-4) *12

Use the clues to figure out where to put the 9 letters.

X X X V V V O O O

Clues

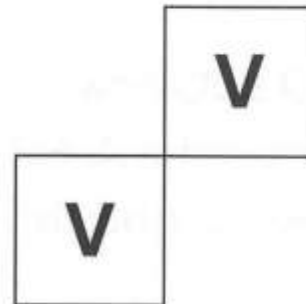
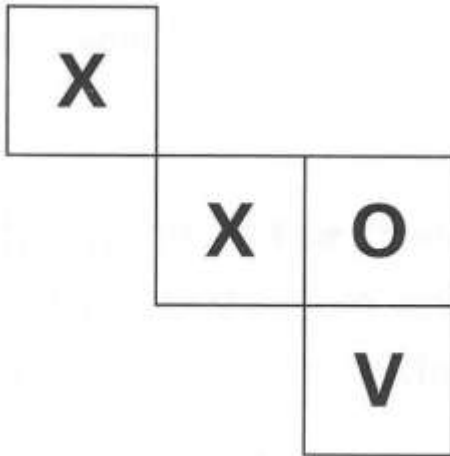


That's Logical! (1-4) **12

Use the clues to figure out where to put the 9 letters.

X X X V V V O O O

Clues

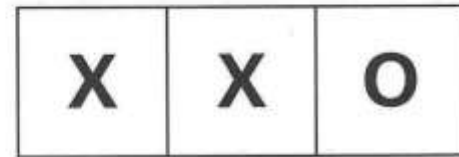
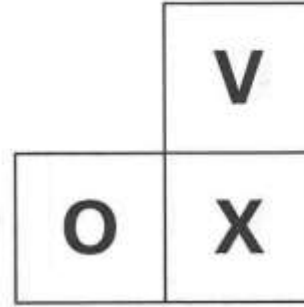
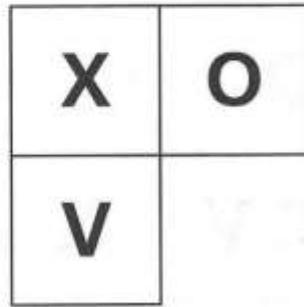
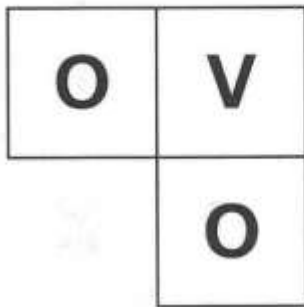


That's Logical! (1-4) ***11

Use the clues to figure out where to put the 9 letters.

X X X V V V O O O

Clues

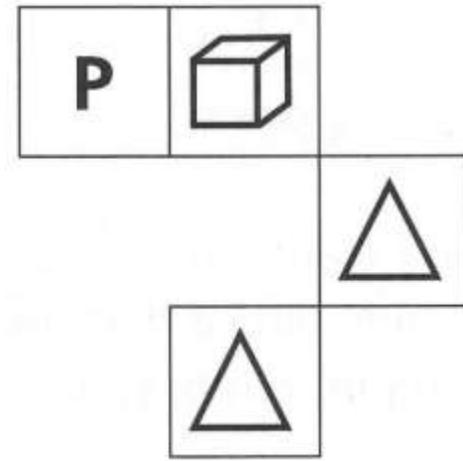
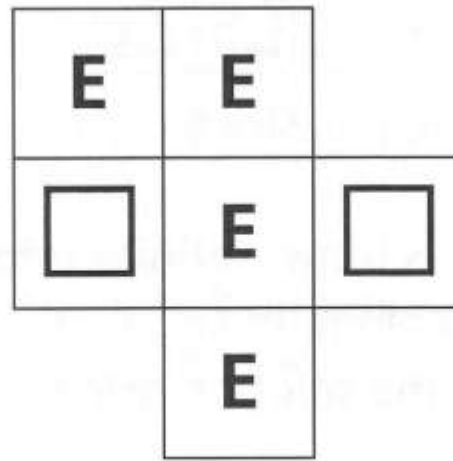
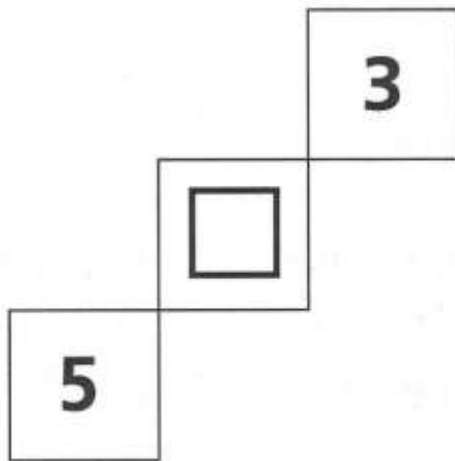


That's Logical! (4-8) *1

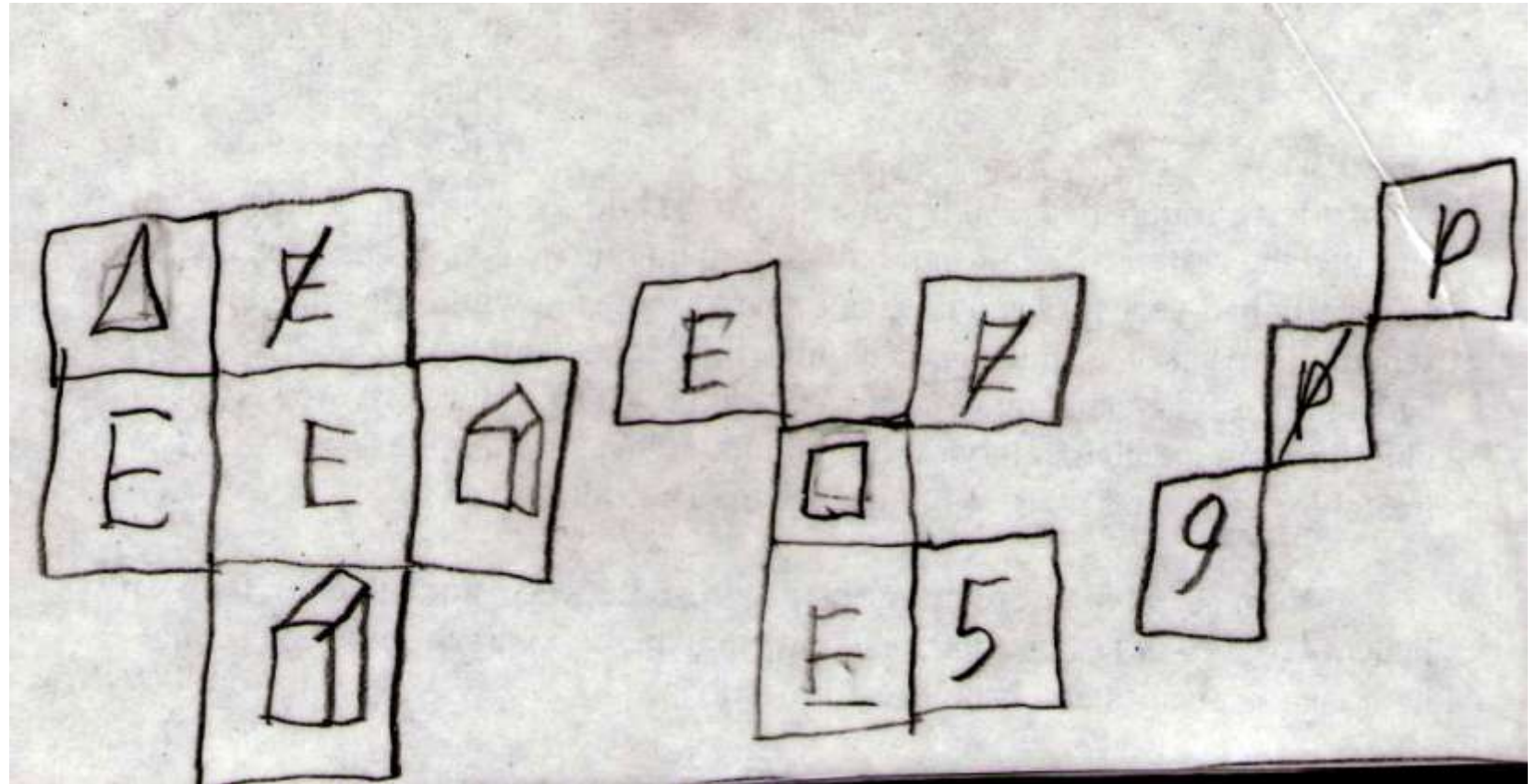
Use the clues to figure out where to write the 9 digits.

1 2 3 4 5 6 7 8 9

Clues



Classroom Connection



About the activities – take 2

- Deductive reasoning, Problem Solving & Proof
 - Negation
 - Conditional statements
 - Relative statements
- Flexibility
 - Individual, group, or class activities
 - Offer full range of difficulty (Pre-K – Mensa)
 - Extensions
- Mathematical communication
 - Alingual entry - ELL
 - From visual clues to mathematical terminology
 - Build verbal reasoning & proof skills
- Clear feedback
 - Self-pacing
 - Promotes independence

Resources

- Mystero
 - www.DefiMath.ca/boutique/mystero.html
 - In Canada
 - Speak English and French
- Meta-Forms, Logix I, & Logix II
 - www.FoxMind.com
 - In Canada
 - Best used for game descriptions
 - Will have a booth at 2008 NCTM Exhibition in Salt Lake City, UT
 - www.zancas.com
 - www.eurekapuzzles.com
 - Coolidge Corner in Brookline, MA
- That's Logical!
 - www.creativepublications.com
 - Will have a booth at 2008 NCTM Exhibition in Salt Lake City, UT



**If you have questions or would like
a copy of the handout, please
contact me at:**

Polina@Sabinin.com

978-263-6040

Thank you for playing along!

Please return the game pieces to as you leave
for your next session.