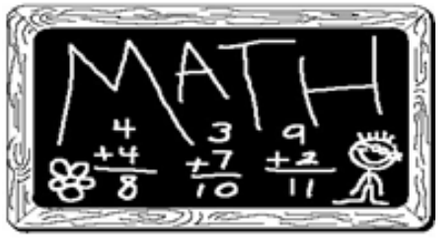
November 30, 2016



P/J Mathematics

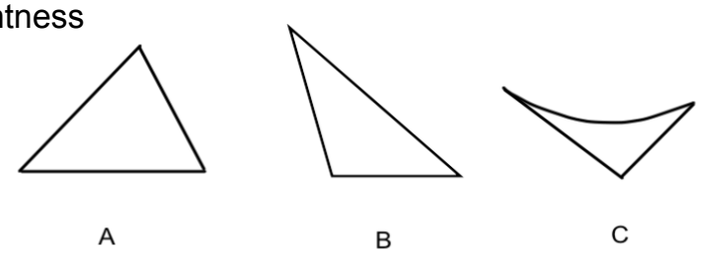
GEOMETRY AND SPATIAL SENSE

November 30, 2016

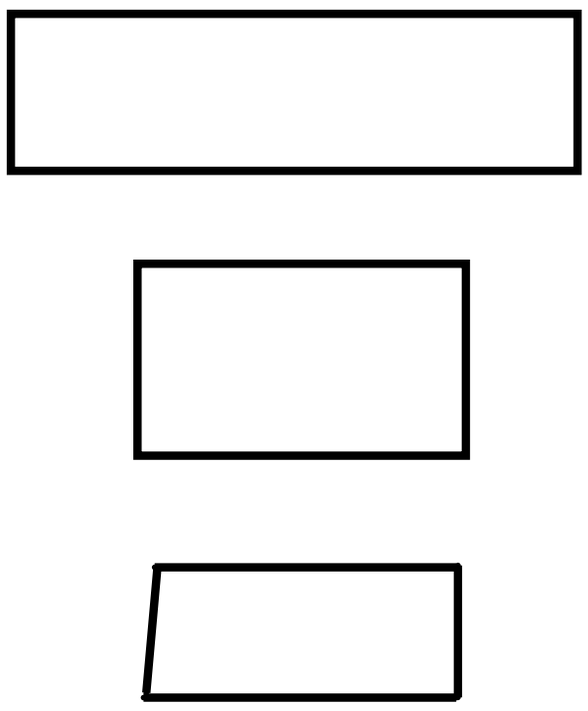
Properties - Geometric Relationships - Location & Movement

BIG IDEAS

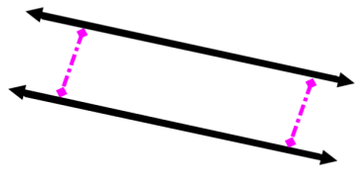
Straightness



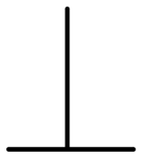
Congruency



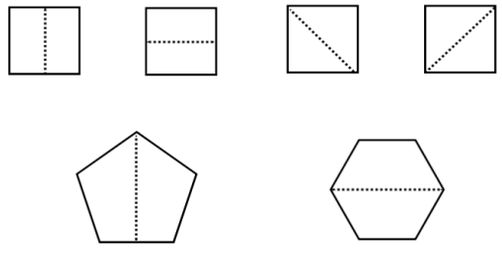
Parallelism



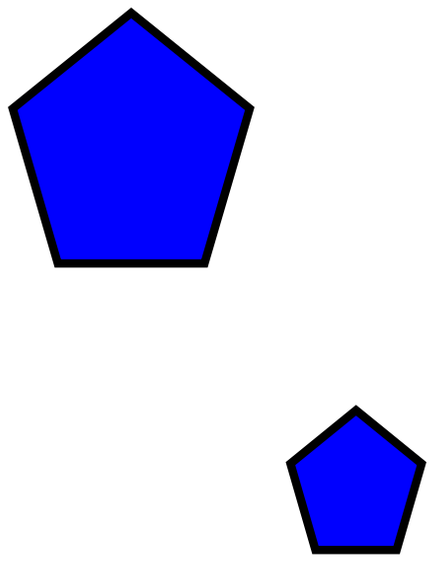
Perpendicularity



Symmetry



Similarity

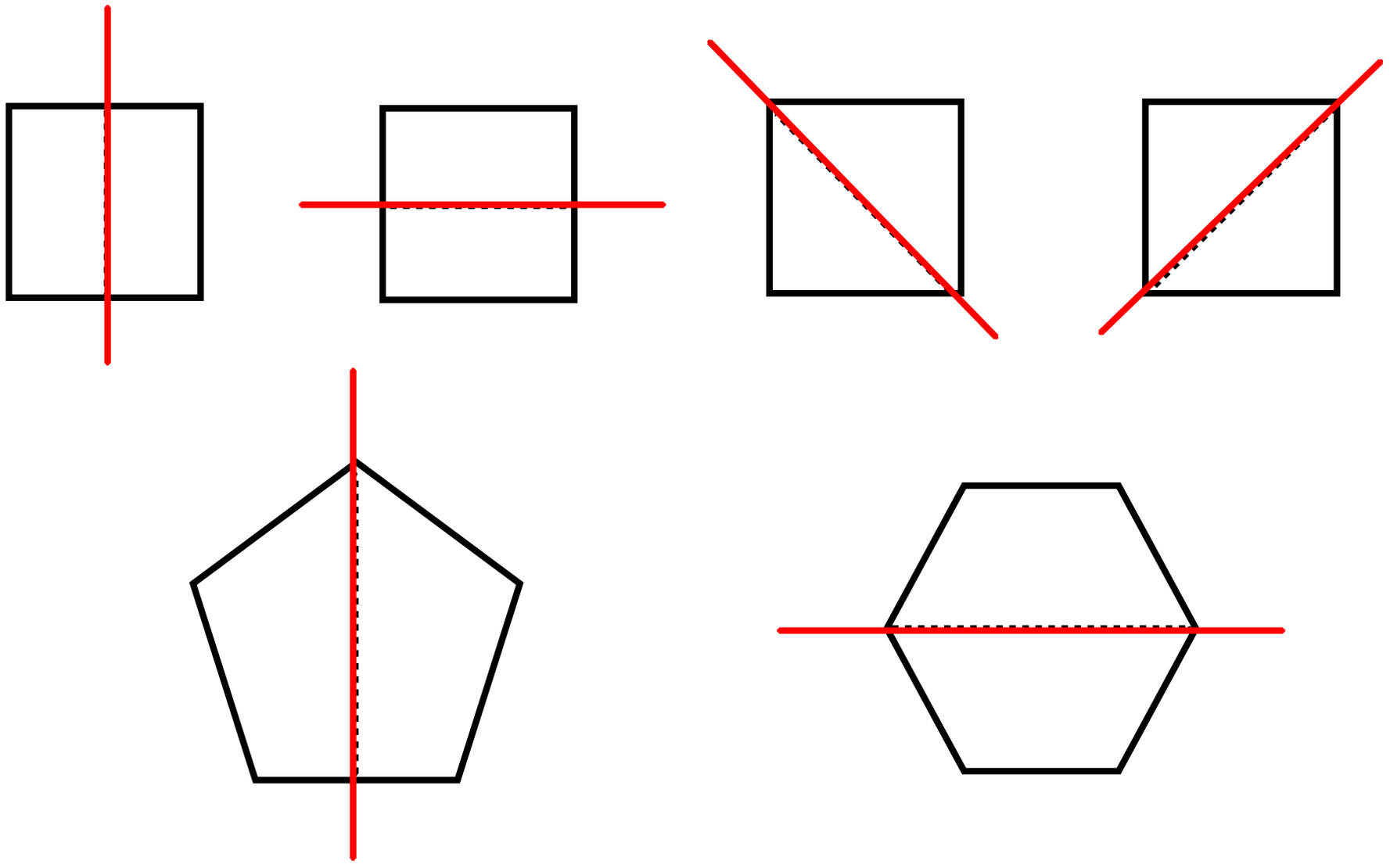


GEOMETRY

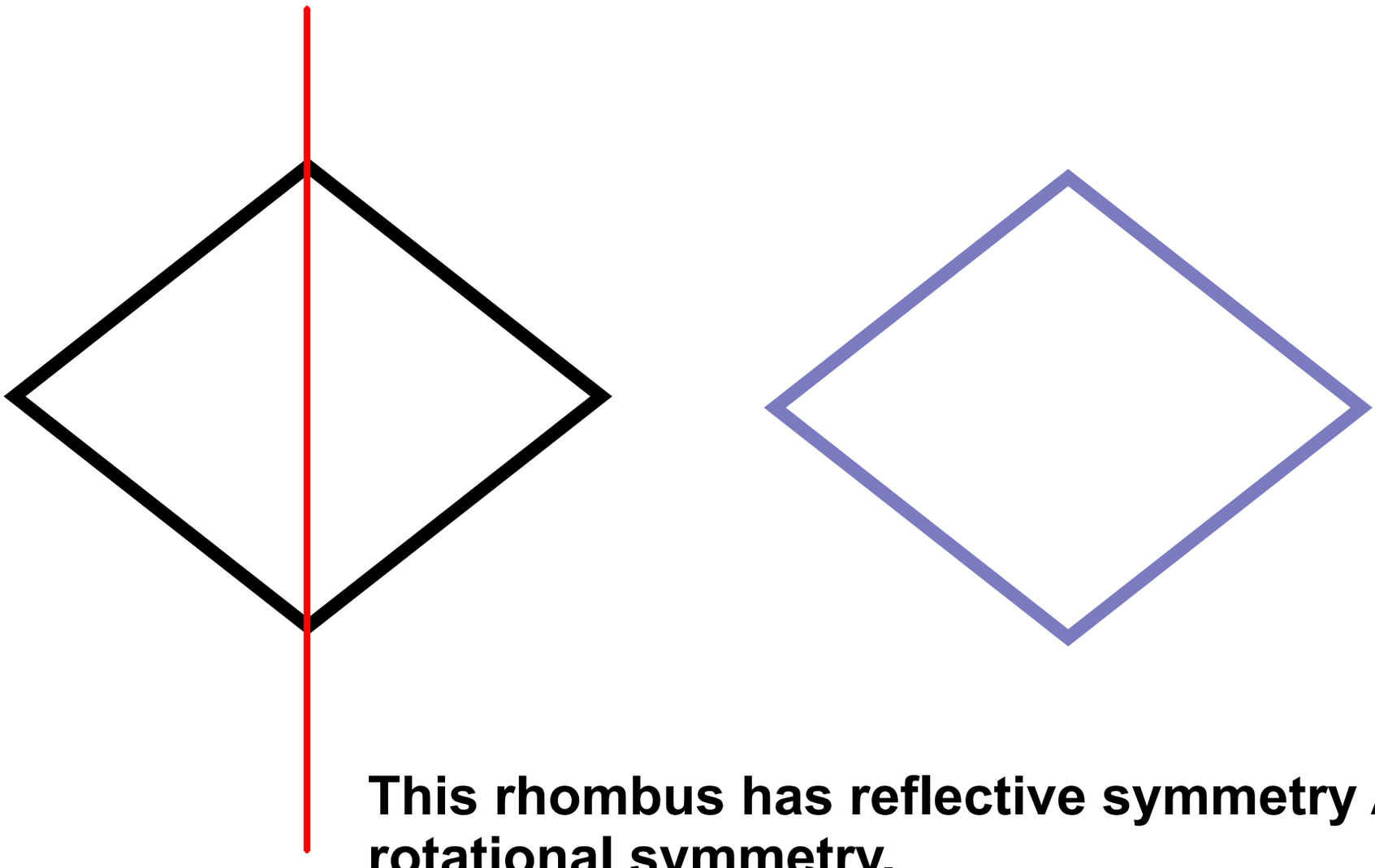
CATHCART, W. GEORGE, POTHIER, YVONNE M. & VANCE, JAMES H. (2004) LEARNING MATHEMATICS IN ELEMENTARY & MIDDLE SCHOOLS: 4TH ED., TORONTO, ON: PEARSON PRENTICE HALL.

TUCKER, BENNY F. SINGLETON, ANN H. & WEAVER, TERRY L. (2002). TEACHING MATHEMATICS TO ALL CHILDREN: DESIGNING & ADAPTING INSTRUCTION TO MEET THE NEEDS OF DIVERSE LEARNERS. COLUMBUS, OHIO: MERRILL PRENTICE HALL.

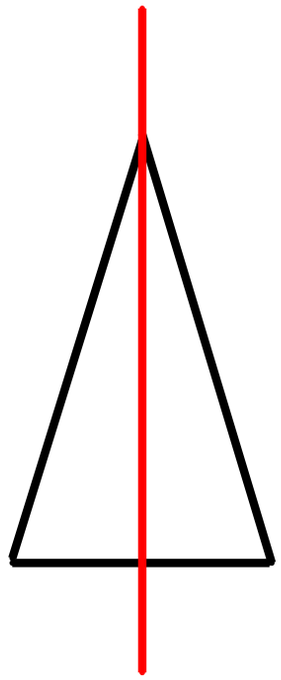
Symmetry



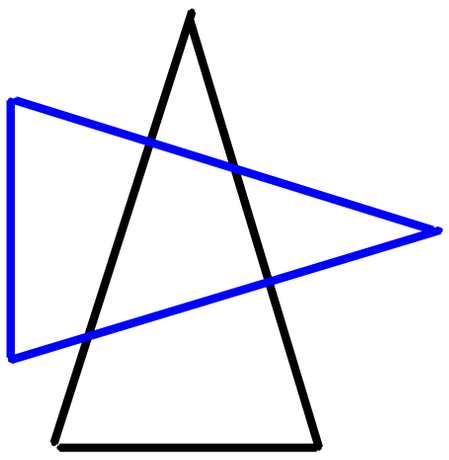
ROTATIONAL SYMMETRY



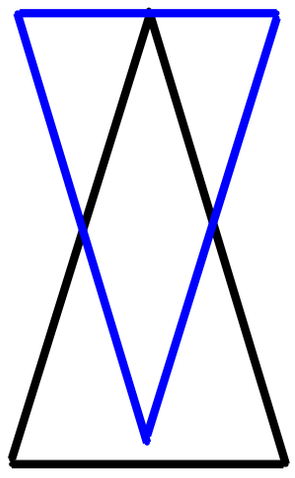
This rhombus has reflective symmetry AND rotational symmetry.



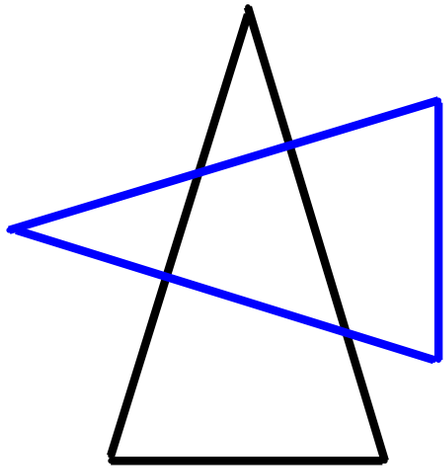
This isosceles triangle has reflective symmetry but not rotational symmetry.



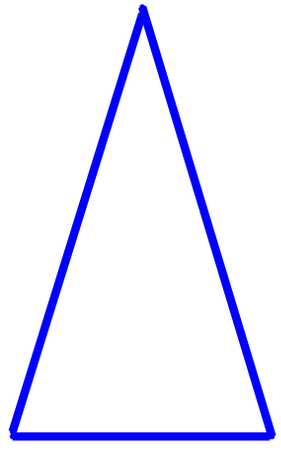
1/4 turn



1/2 turn

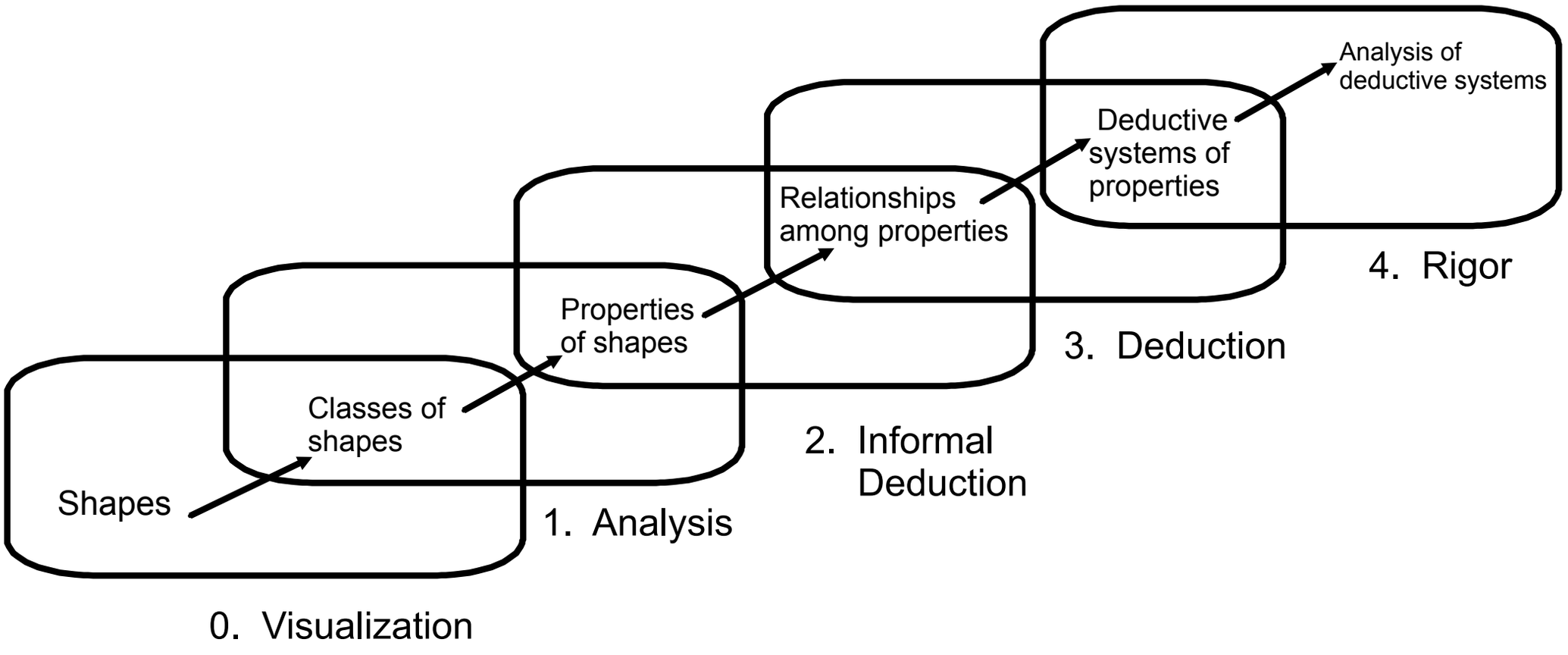


3/4 turn



Full Turn

van Heile Theory of Geometric Thought



Learning Mathematics i Elementary & Middle School s, Third Edition
Authors: W. George Cathcart, Yvonne M. Pothier, James H. Vance

Principles of Instruction

- Concrete → Representational → Abstract
- Varied lesson types & instructional approaches
- Multiple representations
- Examples, non-examples
- Geometric terminology
- Technology