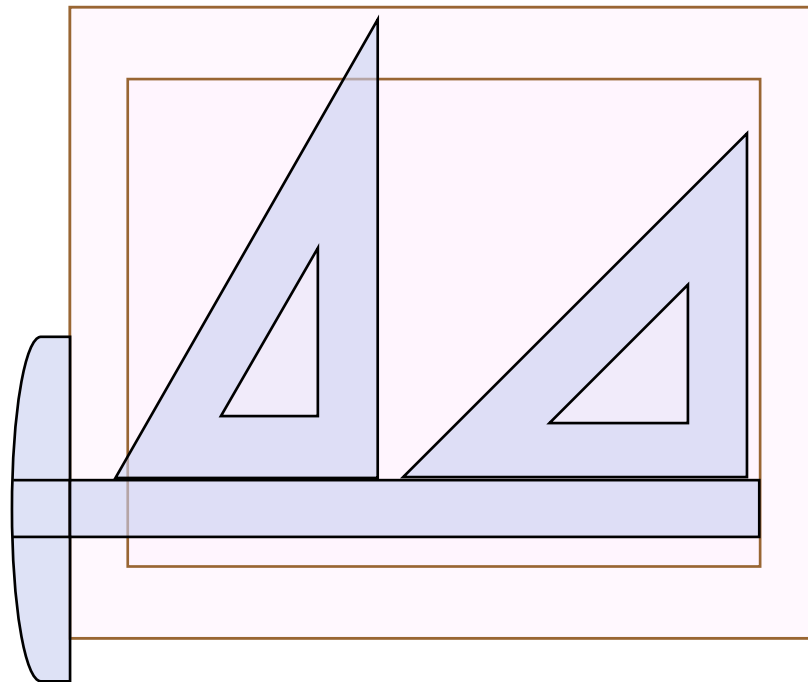


Hands-on Elementary Geometry Using Drawing Board and Tools



info@RightStartMath.com

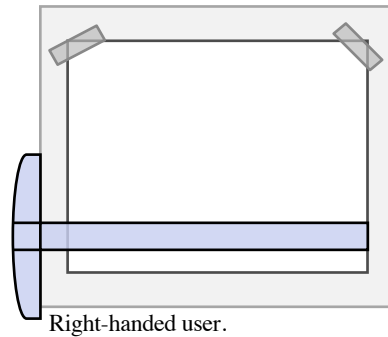
Drawing Board Geometry

- To apply previously learned arithmetic.
- To attend to precision.
- To persevere in problem solving.
- To learn that mathematics is more than computation.
- To appreciate geometry.
- To discover beauty in mathematics.
- To enjoy mathematics.

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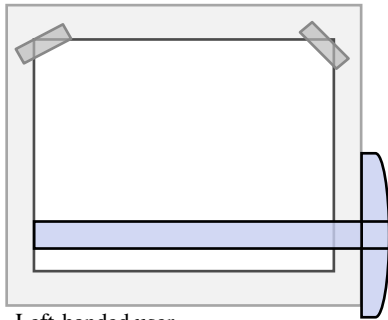
Drawing Tools



Right-handed user.

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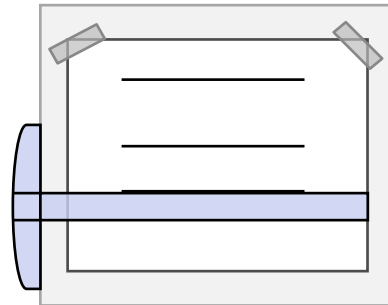
Drawing Tools



Left-handed user.

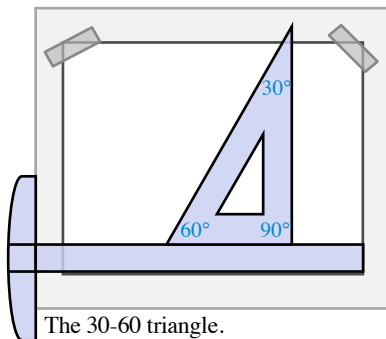
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Drawing Tools



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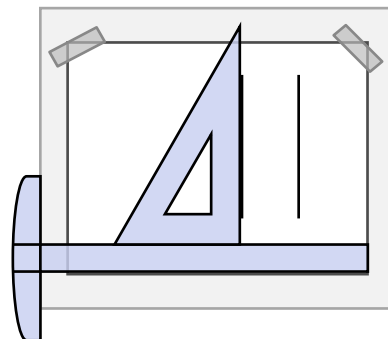
Drawing Tools



The 30-60 triangle.

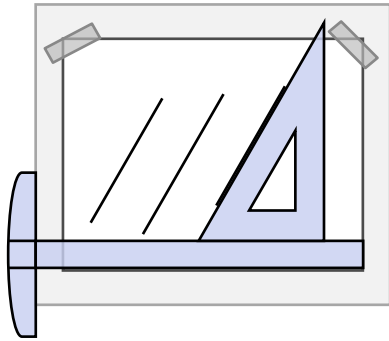
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Drawing Tools

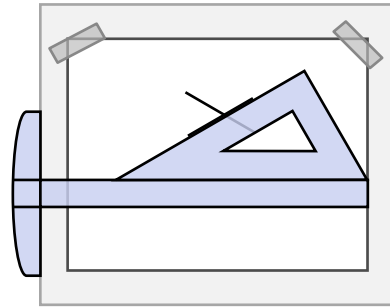


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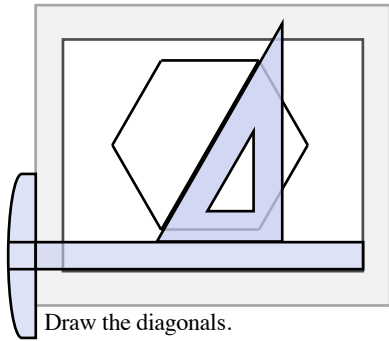
Drawing Tools



Drawing Tools

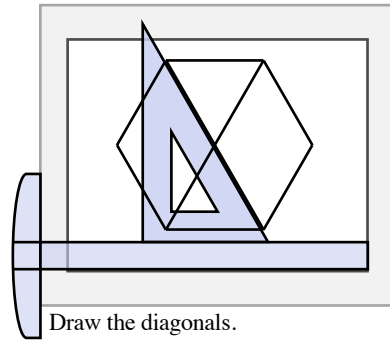


Hexagons



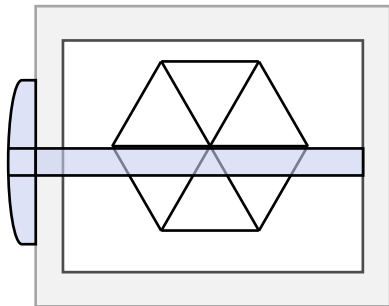
Draw the diagonals.

Hexagons



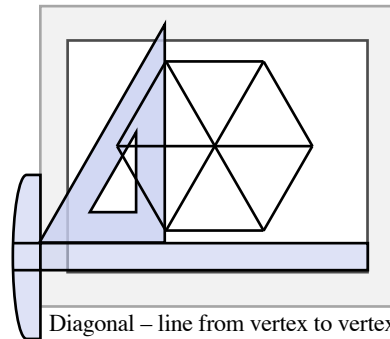
Draw the diagonals.

Hexagons

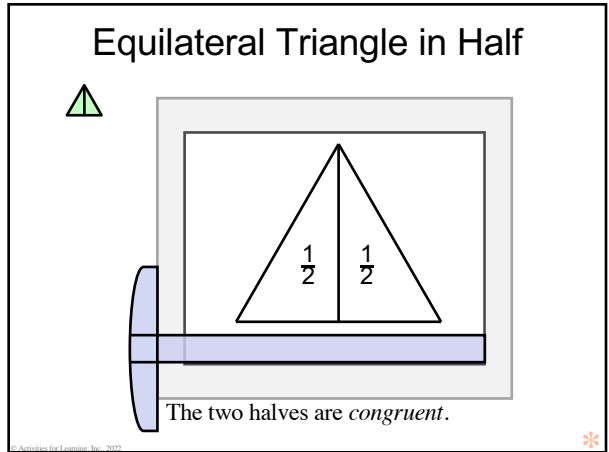
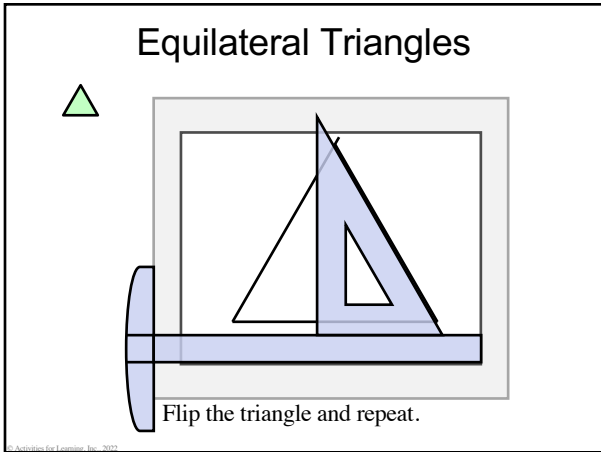
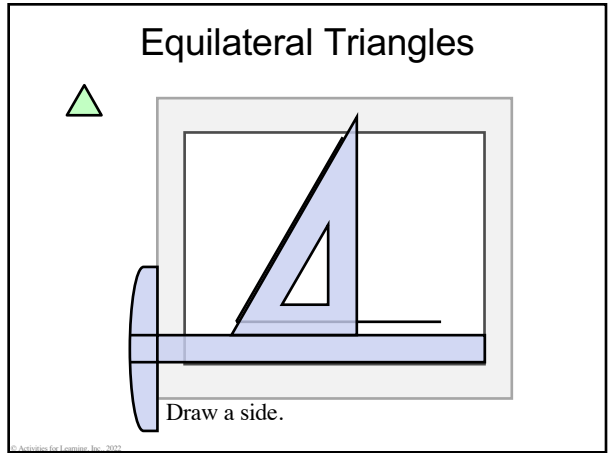
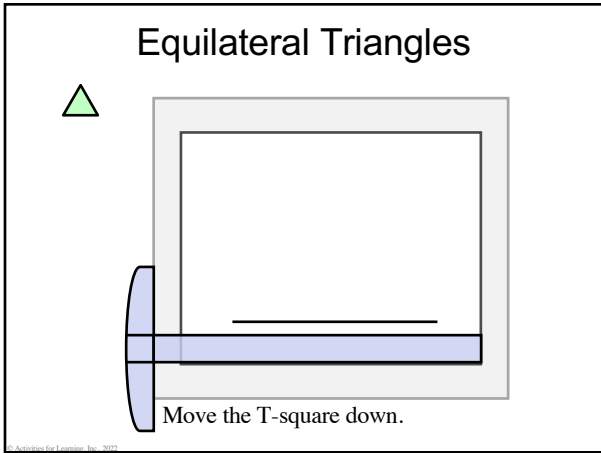
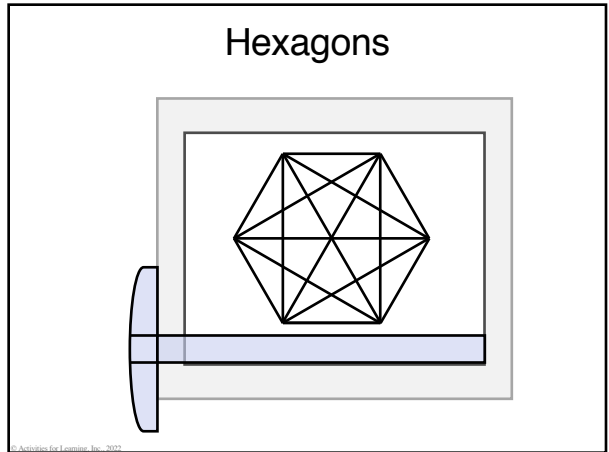
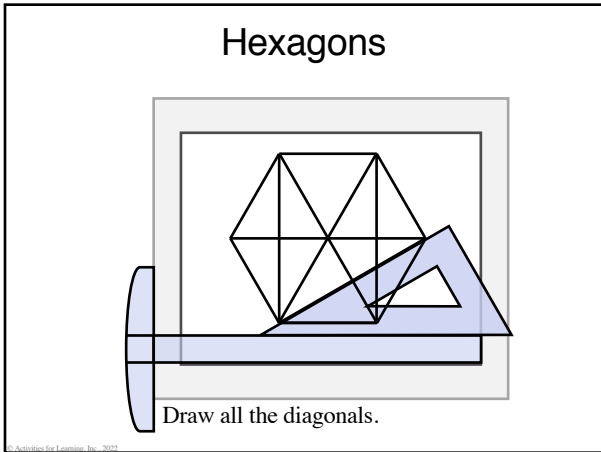


Draw the diagonals.

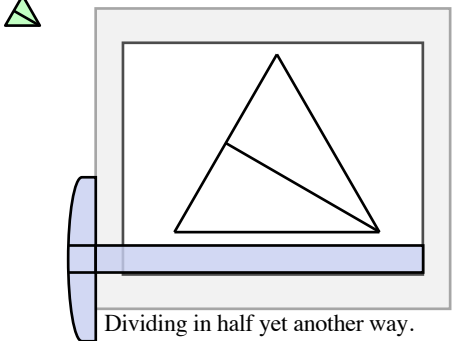
Hexagons



Diagonal – line from vertex to vertex.



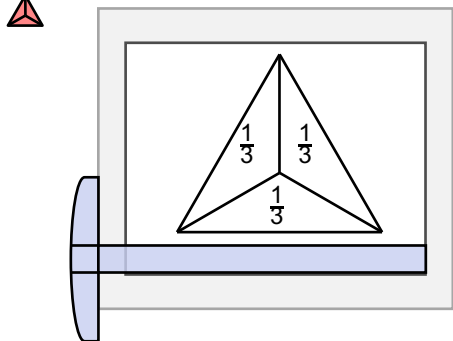
Equilateral Triangle in Half



Dividing in half yet another way.

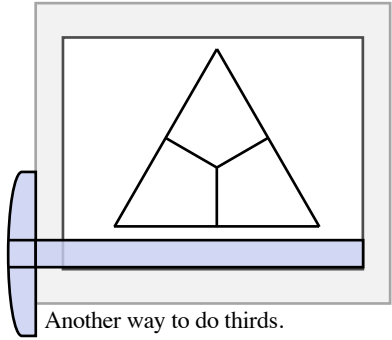
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Equilateral Triangle in Thirds



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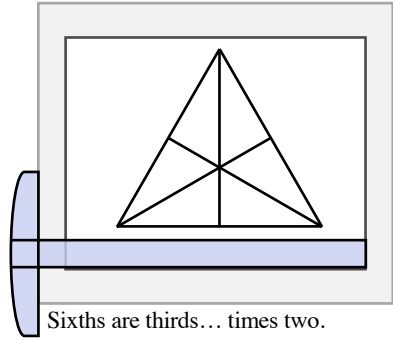
Equilateral Triangle in Thirds



Another way to do thirds.

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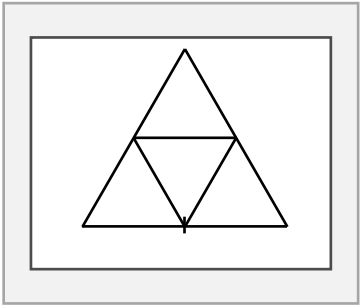
Equilateral Triangle in Sixths



Sixths are thirds... times two.

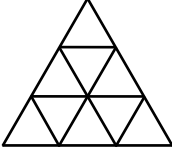
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Equilateral Triangle in Fourths



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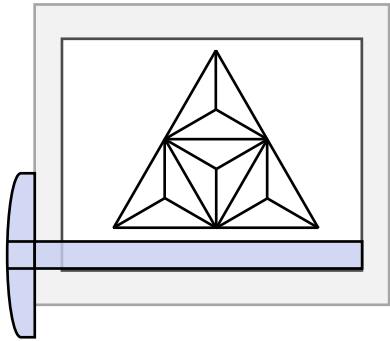
Equilateral Triangle in Ninths



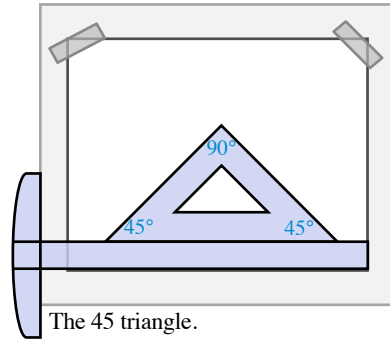
Row Number	Row Number $\times 2$	Triangles in the Row
1	2	1
2	4	3
3	6	5
4	8	7
5	10	9
6	12	11
10	20	19
n	$2n$	$2n - 1$

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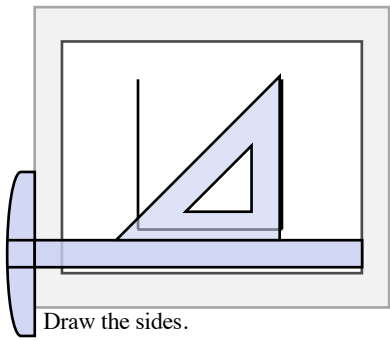
Equilateral Triangle in Twelfths



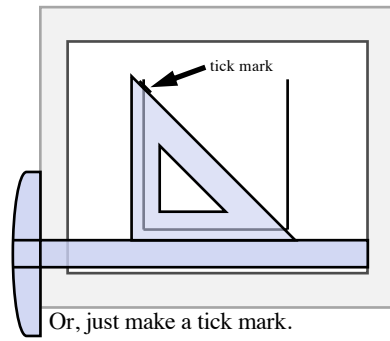
Squares



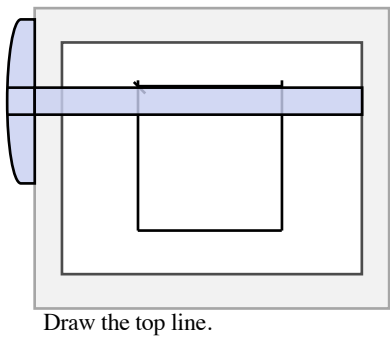
Squares



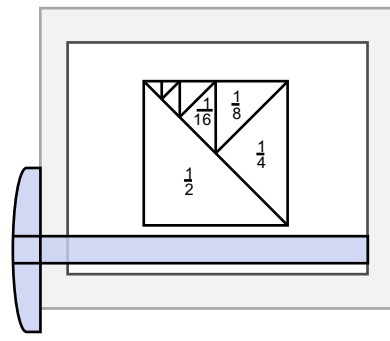
Squares

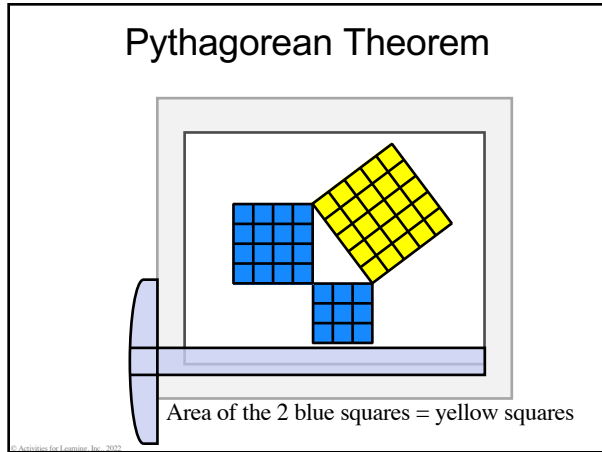
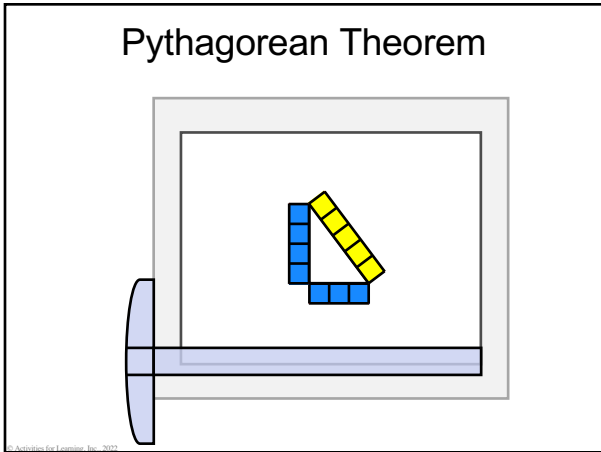
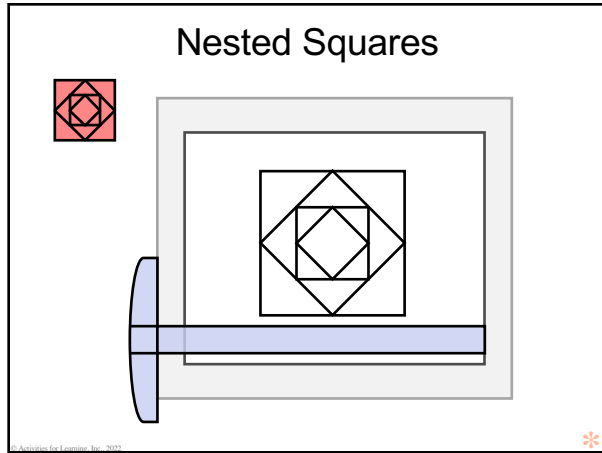
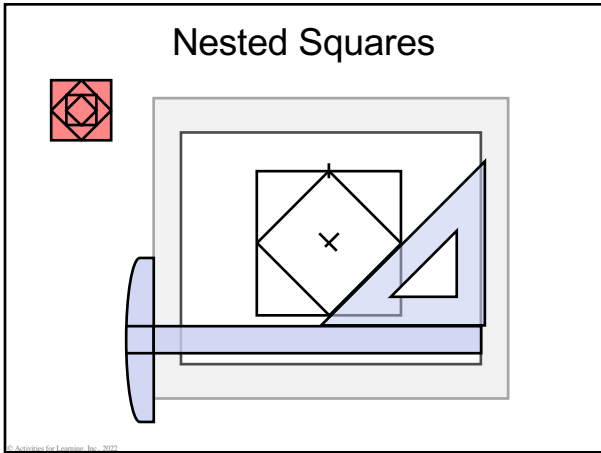
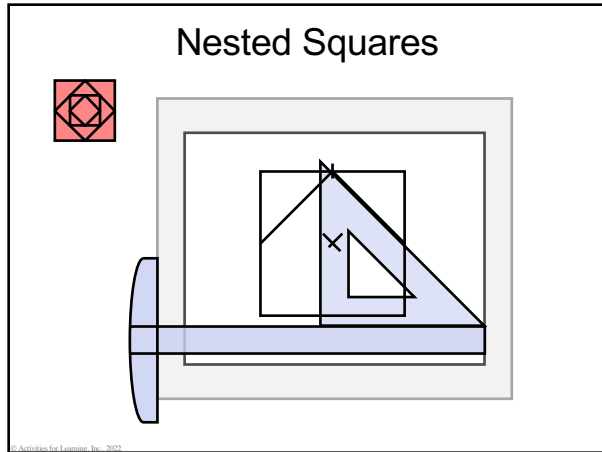
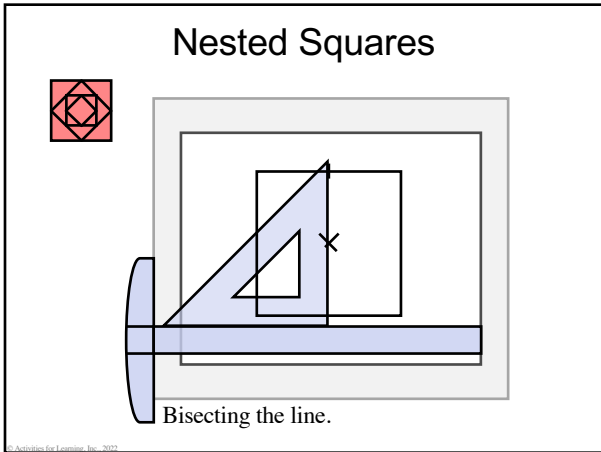


Squares

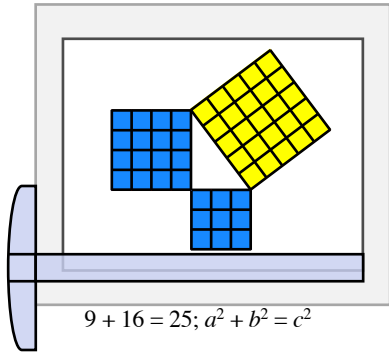


Squares: Halves of Halves

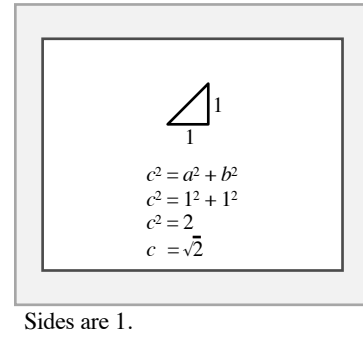




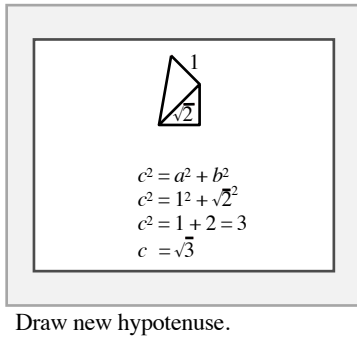
Pythagorean Theorem



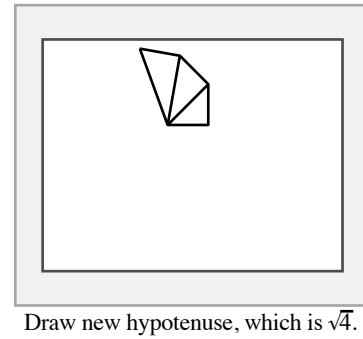
Square Root Spiral



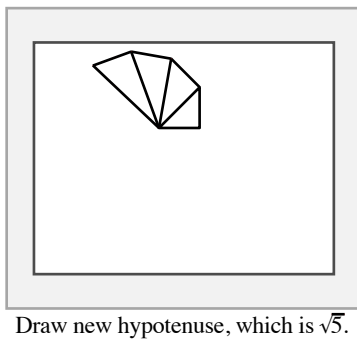
Square Root Spiral



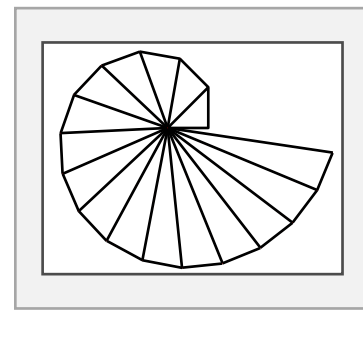
Square Root Spiral



Square Root Spiral



Square Root Spiral



Square Root Spiral

Combine two spirals.

Square Root Spiral

Combine two spirals.

Square Root Spiral

Combine two spirals.

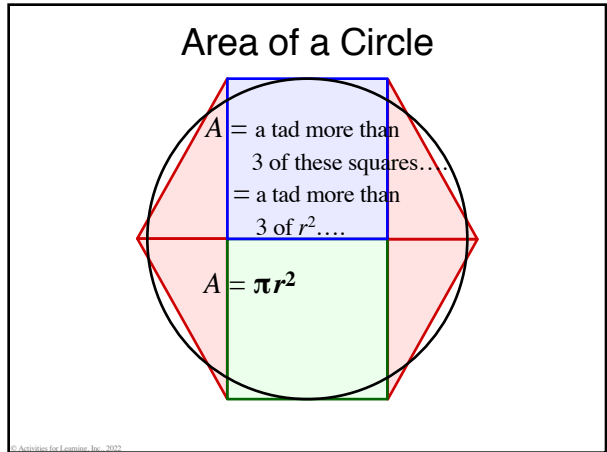
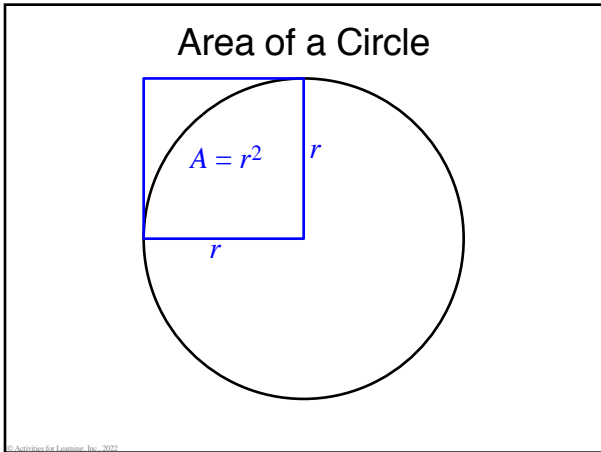
Square Root Spiral

Combine two spirals.

Square Root Spiral

Combine two spirals.

Area of a Circle



In Conclusion ...

Math needs to be taught so
95 percent is understood and
only 5 percent memorized.

Richard Skemp
-- major pioneer in
mathematics education

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In Conclusion ...

Our goal as a teacher of mathematics
is to help our children transform,
expand, and refine these beginning ideas
into deeper mathematical thinking.

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