

GeometryForge — Concept Poster

Print this and pin it up — an at-a-glance map of the GeometryForge cast and the ideas each one carries. Come back to it whenever you want to remember who teaches what.

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Meet the cast — and what each one teaches

Character	What they carry
Master Hypotenuse	Right-triangle relations: $a^2 + b^2 = c^2$
Lady Inscribed-Angle	Circle theorems (inscribed-angle, central-angle, tangent-chord, cyclic quadrilateral)
Sir Transverse	Parallel-line transversals + intercept theorem (proportional segments cut by parallel lines)
Apprentice Sides	Area formulas (triangle area from side lengths; rectangle / parallelogram / trapezoid area)
Captain Construction	Compass-and-straightedge constructions (bisector, perpendicular, equilateral triangle, regular hexagon, circle-given-three-points)
Compass Wraith	Locus problems + circle-as-set-of-equidistant-points

Madame Polygon	Regular-polygon facts (interior-angle sum, exterior-angle sum, regular-tessellation, symmetry of regular n-gons)
Master Tangent	Limit-and-touch problems (tangent to a circle from external point, tangent-chord angle, tangent-as-limit-of-secant)
Axia & Theora	Twin theorists — Axia carries axiomatic-first reasoning; Theora carries theorem-application; together they bridge geometric postulates to derived results
Madame Motion	Rigid motions and congruence — sliding, turning, or flipping a shape never changes its size or shape; two shapes are congruent if one can be carried exactly onto the other.
Scout Scale	Dilation and similarity — resizing a shape by a scale factor keeps every angle the same and multiplies every length equally; similar shapes are the same shape at a different size.
Lady Lattice	The coordinate plane — every point has an exact two-number address, so you can plot it, measure the distance between two points, and find the midpoint exactly between them.

Key ideas at a glance

The big concepts this cast helps you master:

- Points, Lines, and Angles
- Classifying 2D Shapes
- Area and Perimeter
- 3D Shapes and Volume
- Symmetry and Transformations
- Coordinate Geometry

- Pythagorean Theorem
 - Geometric Proofs and Reasoning
 - Geometry
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