

# Transforming HS Geometry with GeoGebra

With Activities from Illustrative Mathematics Geometry

## [IM's Geometry Preview Unit](#)

Jennifer Silverman, Mathematics Curriculum & Technology Specialist

[@jensilvermath](#), [jensilvermath@gmail.com](mailto:jensilvermath@gmail.com), [website](#), [Jen's GeoGebra](#)

John Golden, Grand Valley State University

[@mathhombre](#), [goldenj@gvsu.edu](mailto:goldenj@gvsu.edu), [blog](#), [John's GeoGebra](#)

This page: <http://bit.ly/silvergoldnctm>

Slides for [presentation](#)

[GeoGebra Book](#) of applets for presentation

Setting (JS 5 min)

- [Middle School Math](#) - Open Up Resources video
- [John's edtech circa 2011](#)

Intro to construction: quick intro (JG 10m)

- [Constructions tool](#) for IM
- [GeoGebra applet](#) for IM
- [GeoGebra applet](#) Jen's old one.
- [GeoGebra applet](#) John's for presentation
- [IM lesson](#) constructions with technology <http://bit.ly/IM-G1-8>
- Gamified constructions: [sciencevsmagic.net/geo/](http://sciencevsmagic.net/geo/), [kasperpeulen.github.io](http://kasperpeulen.github.io)

Proof/Transformation (JG 25m)

- [IM lesson](#) angles on a transversal <http://bit.ly/IM-G1-20>
- [A-S-A by transformation](#).
- Tim Brzenzki's transforming illustrations: [S-A-S](#) or GGB book
- Search on [GeoGebra](#)
- John's Transformations book. <https://www.geogebra.org/m/VW3DDaFt>
- Jen's Transformations book. <https://ggbm.at/wfcdpavy>

3D - multi u (JS 30 min)

- <https://www.geogebra.org/m/kuheqydz> Axis of Rotation
- <https://www.geogebra.org/m/xzyzbzyj> Slice That
- <https://www.geogebra.org/m/fmbmkpj7> Build a cuboid and its net
- Different lessons same applet? We pose 2 questions, ask them to pose 1 for their learners.

Future (5 min)

- Augmented Reality: [YouTube](#) and [GeoGebra](#)

### Relevant (or fun) Resources

- [Illustrative Mathematics](#) the curriculum
- [Math Curricula](#) from Open Up Resources
- [K-12 Open Education Resources](#) - a blogpost with an overview
- Tina Cardone & Gabriel Rosenberg, IM authors on [rigor in proof](#)
- Cambridge Espresso on [technology use](#) in secondary maths.
- [Freudenthal Institute](#) Secondary Math
- [Fathom](#) dynamic statistics software
- [Make a Punch Card](#)