

Grades 9-10

Distance Learning Module: 1 Week of: March 30

Mathematics: Geometry Honors - [Unit D - Polygons](#)

Targeted Goals from Stage 1: Desired Results

Content Knowledge: the sum of the measures of the angles of a triangle is 180, the measure of an exterior angle of a triangle is equal to the sum of the remote interior angles, the Midline Theorem for triangles, the No Choice Theorem for triangles, the sum of the interior angles of a polygon with n sides = $(n - 2)180$, the sum of the exterior angles of a polygon with n sides = 360 (regardless of n), the number of diagonals in a polygon with n sides = $\frac{n(n-3)}{2}$, regular polygons with interior and exterior angles

Vocabulary: exterior angle, interior angle, pentagon, hexagon, heptagon, octagon, nonagon, decagon, dodecagon, pentadecagon, n-gon, regular polygon, concave, convex, exterior angle, interior angle, diagonal, similar, dilation, reduction

Skills: using interior and exterior angles measures of a polygon to solve problems, solving regular polygon problems involving angles, applying the Midline Theorem, using AAS to find triangles congruent, solving problems involving the number of diagonals in a polygon, identifying whether a pair of polygons is similar, using proportional reasoning and congruent corresponding angles to find missing dimensions of similar polygons, applying theorems involving proportionality

Expectation:

| Description of Task (s): | Resources and Materials: | Daily Checks (Return to Google Classroom or snapshots from a cell phone) |
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| Monday: Introduction Video | Video on Google Classroom - Personalized | Google Form - Personalized |
| Tuesday: 7.1 | <u>Triangle Applications Theorems - 7.1</u> | Bookwork: Pages 298-299, #s 1-5, 7 |
| Wednesday: 7.2 (Honors) 7.3 (int and ext angle formulas) (L2) | <u>Sum of interior and exterior angles Khan - 7.3</u> <u>No Choice Theorem and AAS - 7.2</u> <u>AAS Geogebra</u> | Bookwork: Pages 304-306, # 1, 3, 5, 8, 9, 11, 17, 18 (Honors) <u>Khan Assignment (L2)</u> |
| Thursday: 7.3 (Honors) 7.3 (diagonals L2) | <u>Video on Google Classroom</u> | Bookwork: Pages 309-310, #s 1,2, 4-7, 10abc |

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| Friday: 7.4 Regular Polygons | Video on Google Classroom | Bookwork: Pages 316-317, #s 1-4 |

Week criteria for success (attach student checklists or rubrics):

By the end of this module, students will be able to:

- Apply theorems about interior angles, exterior angles and midlines of triangles.
- Apply the No-Choice Theorem and AAS theorem (Honors only).
- Use some important formulas that apply to polygons.
- Recognize regular polygons, use formula to find the measure of an exterior angle of an equiangular polygon.

Supportive resources and tutorials for the week (plans for re-teaching): Khan Academy, Kuta Software worksheets, Office Hours