Geometry 2017 Similarity Unit Lesson Plans

Tuesday, February 7, 2017

Objective: I can write and solve proportions to find missing sides in similar figures, understanding that I am using the definition of similarity to solve.

* Warm-up: turn to p 561 and finish 4-12 showing algebra. Add: 1-2, 14-16.
* View tests/ make appts for make-ups, etc.
* Share/check answers/ questions.
* Investigation: create, measure and describe what it means for polygons to be similar (based on half of a sheet of copy paper).
* Glue into notes: definition of similar figures. Read out loud. Interpret by answering questions based on definition.
* How to write proportions to find unknown sides in similar polygons.
* HW #10 – worksheet. Work in class to write and solve proportions.

Thursday, February 9, 2017

Objective: I can understand and interpret similarity as a dilation, performing dilations in the coordinate plane.

* Question on board: are these figures similar? Are they congruent? How do you know?
* Dilation Definition Activity – do and glue into notebook.
* Take a grade on HW #9 – 4 pts
* Correct warm-up, answer questions.
* Correct HW/ questions?
* Non-rigid transformation investigation; finish as HW #11
* HW Quiz over HW #10 – 4 pts
* Test make-up issues

Monday, February 13, 2017

Objective: I can interpret parts of similar figures. I can dilate without coordinate plane. I understand what a midsegment is and that it is half of the third side of the triangle and parallel to it.

* Warm-up: similarity questions/ quick review – on board
* Walk around and view homework. Discuss make-up issues.
* Share warm-up popcorn around room.
* Add words to homework. What is true about midsegments, sides of dilated figures, finding center of dilation, etc.
* Math Open Ref demonstration of dilation without the coordinate plane.
* Activity – dilation without coordinate plane, using a ruler to measure.
* Demonstration with Geogebra – AA similarity shortcut for triangles. SSS similarity shortcut for triangles.
* HW #12 – handout, more dilation practice.

Quiz Friday over content so far. Will not include much on triangle shortcuts.

Wednesday, February 15, 2017

Objective: I can dilate figures or find center of dilation without coordinates. I can find the length of a midsegment. I can understand AA, SAS, and SSS Triangle Similarity Shortcuts and use them to determine if triangles are similar.

* Go over homework #12 in detail. Questions? How to do 1/3 scale factor. Connect vertices back to origin (is that the center of dilation with a multiply rule). Are the corresponding sides parallel? What about problem 1? Are two of the sides collinear?
* Activity: Dilation Performance Task Problems 1 and 3. Turn in for grade.
* Activity: investigation (green or purple sheet) on SAS, SSS, and AA similarity shortcuts. Use patty paper to show that the smaller triangles fit into the corner of the larger triangles with the third sides parallel.
* HW #13 – worksheet over triangle shortcuts. Multiple choice, but you need to mark the sketches, then write what sides are corresponding with their ratios, write what angles are congruent.

Quiz Friday over the basics of similarity. See daily blog.

Friday, February 17, 2017

Objective: I can demonstrate mastery over basics of similarity.

* Warm-up: solve two proportion equations.
* Quiz over HW #12 and basics of similarity – 20 pts
* Make your homework better – then receive a grade for 4 pts
* Popcorn practice – explain how you knew. Use AA, SAS, or SSS.
* Fix homework.
* Activity: explain why the triangles are similar (or if they are). (2 examples, then do 4)
* HW #14 – 3 problems: explain why.

Test next Friday, February 24 – similarity

Wednesday, February 22, 2017

Objective: I can apply skills related to similarity and dilation.

* Warm-up on board: are these proportional? Write proportions from two triangles to test to see if the sides are proportional. Use this to fix problem 1 on the homework.
* What do good explanations look like? How to write in a grid.
* Share good homework. Take a grade.
* Dilation Activity
* Return quizzes
* Unit Review handout, HW #15 – work on for the rest of class.

Test Friday – similarity and dilation – 50 pts

Friday, February 24, 2017

Objective: I can demonstrate mastery over similarity and dilation.

* Warm-up: parallel line in a triangle, explain why. Take a grade on HW #15.
* Share warm-up. Go over review by playing trash-ket-ball and sharing explanations.
* Unit Test – similarity NO HOMEWORK