Geometry Triangle Unit Lesson Plans

Thursday, January 5, 2017

Objective: I can discover and apply triangle inequality theorems.

* Pass out investigation. Discover two true statements about sides of triangles.
* Turn in any make-up work.
* You may start a new notebook for this semester. Have some type of folder for homework handouts. Bring pencil and notebook daily.
* Write up results of investigation (the two short sides of a triangle added together must be more than the length of the longest side). (The longest side of a triangle is opposite the largest angle; the shorteson Ht side is opposite the smallest angle.)
* Ally these by solving problems on worksheets in class. Use new write-up for notes.
* Turn in work done in class.

Monday, January 9, 2017

Objective: I can apply triangle inequality theorems, sum of angles in a triangle, definition of isosceles triangle, linear pairs, and vertical angles.

* Re-cap: grade issues, make-ups, new notebooks, folders, etc.
* Re-cap: what were you supposed to figure out on Thursday?
* Do warm-up on board.
* Pass out work done on Thursday. Go over. Questions. Finish back of last page for homework tonight in addition to new worksheet.
* In class activity: triangle sum “puzzles” with partner. Use calculator.
* HW #1 – handout: triangle sides and inequalities, triangle sum, definition of isosceles triangle.
* Quiz Friday over triangles.

Wednesday, January 11, 2017

Objective: I can apply triangle inequality theorems, definitions of types of triangles, and the definition of congruent polygons to solve problems.

* Warm-up: note-building activity on congruent polygons
* Take a grade on HW #1 – 4 pts
* Share student responses on warm-up. Sketch congruent polygons, mark, and interpret in terms of the name.
* Share HW/ ask and answer questions (This is the quiz content for Friday.)
* Practice: interpreting parts of congruent polygons.
* HW #2 – interpreting parts of congruent polygons
* Kahoot – quiz practice – 15 questions over quiz content

Quiz Friday – 28 pts - triangles

Friday, January 13, 2017

Objective: I can demonstrate mastery over triangle inequalities, triangle sum, and isosceles triangle properties. I can discover and apply SSS and SAS shortcuts.

* Warm-up: exterior angle, 3rd angle, range of sides
* Take a grade on HW #2 – 4 pts (what does it mean to identify corresponding parts?)
* Share HW answers/questions
* Investigation: Triangle congruence shortcuts SSS and SAS.
* How to apply SSS. What will homework look like?
* HW #3 – triangle congruence shortcut handout, attached in daily blog on website
* Quiz – Triangle Properties and theorems – 24 pts

January 18, 2017 – Wednesday

Objective: I can discover and apply triangle congruence shortcuts.

* Go over HW hints from website. How to see SAS.
* Warm-up: Small square sheet to practice SSS and SAS.
* Take a grade on HW #3 – 4 pts
* Share HW #2 and #3 answers/ questions/
* Yellow sheet: ASA investigation. Then: (sketch from board) why does SAA also work (because third angle are also congruent.
* Why do AAA and SSA not work? Pass out Pink Notes Sheet. X out the two that do not work. Keep to refer to during homework.
* HW #4 pass out – demonstrate #2 on back. What to do next. Do #1 on front together.
* Work on HW #4 for the last 10 minutes of class.

Friday, January 20, 2017

Objective: I can apply triangle congruence shortcuts and describe how/why I made this decision.

* Warm-up: note-building activity – 5 minutes alone, 5 minutes with partner – read notes and apply to solve one problem, explaining why as you go.
* Share good work.
* Self-check homework, questions.
* Practice: triangle shortcuts and writing congruence statements (mark the sketch with the given information).
* View quiz scores while practicing.
* Share good work.
* Modeling: transfer homework problem to flowchart template
* Pass out homework #5 – look at example, model one problem.
* HW Quiz -4 pts over HW #4

Tuesday, January 24, 2017 – Block 7 of Triangle Unit

Objective: I can apply triangle congruence shortcuts and corresponding parts to construct flowchart proofs.

* Warm-up: triangle congruence problem with vocabulary questions
* Share warm-up and use it to construct a proof (documentation of what my brain does)
* Share homework answers/ questions
* Practice: 12 congruence problems – why are the triangles congruent, what triangles are congruent?
* Share answers.
* Modeling – flowchart of problem 1 as a proof
* Try problem #2
* HW #6 – do problems 13-18 on worksheet, name all triangles correctly. Do problems 6-7 as flowchart proofs (see attachment on daily blog post)

Quiz Thursday on Triangle Congruence; Test next Friday

Thursday, January 26, 2017

Objective: I can demonstrate mastery over triangle congruence. I can fill in the blank to create flowchart proofs of situations involving congruent triangles.

* Warm-up: Name segments formed by a midpoint, name congruent alternate interior angles formed by parallel lines, fill in the blank proof of corresponding parts of congruent triangles (2 of these)
* Take a grade over HW #6 and proofs of problems 6 & 7
* Return HW #5 quizzes
* Answers to warm-up (shared around room)/ answers to HW – checked for accuracy/ questions
* HW #7 – 2 more flowchart proofs
* Popcorn questions: from names, give corresponding parts of triangles
* Quiz – Triangle Congruence – 13 pts
* Work on homework in class

Test over Triangles next Friday, February 3, first part of class.

ASPIRE interim on Monday in class

Monday, January 30, 2017

Objective: I can practice applying skills related to triangle congruence. I can demonstrate mastery over early high school mathematics.

* Collect HW #7 – 4 pts
* Test announcement. View quizzes. Quiz re-takes (hand out passes).
* Pass out HW #8 – first part of unit review (will help with re-take of 2nd quiz).
* ASPIRE Interim for Early High School Mathematics

Test Friday – Triangle Unit

Wednesday, February 1, 2017

Objective: I can prove that triangles are congruent. I can apply skills related to triangles and congruence.

* Warm-up: google form of first quiz, re-work on your own. Then self-check.
* Collect HW #8a, grade and return
* Return HW #7/ partner discuss/ guided with questions.
* Pass out HW #8b – do first proof using HW #7 as a guide.
* Return HW #8a – check answers on screen, questions, third piece of information?
* Work on #8b for the balance of class, with partner, using correct vocabulary to ask questions.

Test Friday, Triangle Unit – 60 pts

Friday, February 3, 2017

Objective: I can demonstrate mastery over triangles and congruence.

* Proof activity: questioning, marking, practicing, correcting, etc.
* Problem: What corresponding parts need to be congruent in order for the triangles to be congruence by…?
* Examples: solving proportions
* Collect review – 6 pts
* Triangle Congruence Test – 60 pts
* HW #9 – work in class: p 561:4-12. Write proportions. Show work.