Daily Lesson Plans for Pre-AP Geometry

Building Blocks of Geometry with angle pairs

Tues-Wed, August 27-28, 2019

Objective: I can define, describe, sketch, label, draw and compare basic geometric terms.

* Go to p 24 in online textbook.
* Introduction to the deductive system (like Euclid). Cartoon about circular reasoning. What it means to build on a foundation. Popcorn questioning about our perceptions of point, line, plane and infinitely small and infinitely big.
* Start Geometric Truth section with a small section about undefined terms with good sketches and labels. Then create first 7 definition entries: collinear, coplanar, line segment, segment addition, congruent segments, midpoint, ray. Make sure you have good sketches and labels and use the organization taught in class.
* Labeling and naming issues: lines, segments, and rays named with 2 letters and correct symbol above. Any 2 letters on a line, endpoints of a segment, endpoint and one more point on a ray. Like $\overleftrightarrow{AB},\vec{AB},or\overbar{AB}$
* Discussion, demonstration, popcorn questions – point, line, plane, intersections of planes, lines, parallel lines, midpoints, etc. Include sticky note activity.
* Sketch and name of angle on board. What do you think a good definition of angle will include? And its measure will always be the shortest rotation (always less than 180 degrees and more than 0 degrees). All geometric figures just hang out in space and do not have to be sketched to exist.
* HW #5: p 28: 2-6, 8-11, 13-16, 18, 21-22, p 37:1-14. Define in geometric truth, p 33: angle, angle measure (with good labeled sketches).
* Also in some classes we practiced measuring segments and/or angles; in some classes we traced words through our GT with highlighter.
* View tests next class.

August 29-30, 2019 – Thurs-Fri

I can define, describe, name, label, sketch, and measure basic geometric figures.

* Warm-up: note-building activity
* Warm-up: naming of segments, lines, rays, angles, sketching, and T/F
* Take a grade on HW #5 – 4 pts (all but 3rd)
* Share warm-up answers, check HW #5, questions
* Add more angle terms to Geometric Truth: congruent angles, angle bisector, protractor
* Practice measure angles and segments (old textbook) – pp 43-44: 15-22. Group check.
* Practice marking sketches and interpreting marks on sketches: p 44:32 & 34
* Midpoint Formula Graphical Investigation – derive and apply the formula.
* (some classes – go over angle vocabulary)
* HW #6 – (new book) – p 29:19-20, 23-24, 27, p 32:1-4, p 39:31,33,34,36
* View tests

Quiz next block like today’s warm-up. – 16 pts

Sept 3-4, Tues-Wed, 2019

I can find midpoint and missing endpoint given coordinates of a segment. I can apply segment and angle addition algebraically. I can construct definitions of geometric terms from sketches and non-sketches.

* Warm-up: measure segments and angles OR use algebra and segment and angle addition to find lengths of segments and angle measures. Practice sketching. Define and sketch and label and name “adjacent angles” (from board).
* Take a grade on HW #6 – 4 pts
* Answers to warm-up shared. Answers to HW shared. Define “angle addition” from sketch and label in new textbook on p 36 of new textbook.
* Go over homework #6 carefully. Use #20 on p 29 to take about counterexample sketch for definition of midpoint. #4 on p 32 – share different strategies for finding the missing endpoint.
* Definition writing activity (pp 47-50 in old book) – What is a widget? How do you write a good definition? What is a counterexample sketch? With partner, make up definitions for all the sketches on pp 49-50 (7 terms). Read and do if you were absent (pp 42-45 in new book).
* Share definitions in most classes. HW #7 was p 32: 8 (rectangle only), p 39:35,37, p 48: 13,15-17, 19-20, 22, 24, 29-30.
* HW #6 – pp 39-40:37-40, 42, pp 47-48: 4-6, 9-13, 15-17, 19-20. Write up in geometric truth from p 43: parallel lines, perpendicular lines, skew lines (with good sketches and labels)
* Quiz 1.1-2 – 18 pts

Coming soon: Quiz on Sept 9-10 (Mon, Tues) – 40 pts, section 1.1-5 from textbook. Topics available on Thurs-Fri.

Sept 5-6, Thurs-Fri, 2019

I can apply algebra to geometric definitions to find unknown measures. I can sketch, name and label geometric terms accurately. I can construct definitions of geometric terms.

* Warm-up: finish algebra worksheet on segment and angle addition. Check answers. Then measure angles and segments on back of page.
* Take a grade on HW #6 – 4 pts
* Go over warm-up, HW #6, vocab on angles. Sketch vs draw, read p 59
* Sketching practice on screen, 5 problems.
* Linear Pairs/ VA True/False, self-check.
* Share sketches, questions.
* Pass out topics for big quiz next time.
* Vocab (old book) read p 54-55. What is a polygon? A diagonal? How to name? What does classify mean? Study chart on p 54. What are congruent polygons? Equiangular, equilateral, and regular polygons? Write these up for HW. (take photo of board)
* HW #7 - p 48: 21-24, 29-30; p 52: 1-9,11-12,14-18,24-25.

Quiz – 40 pts – Mon-Tues, Sept 9-10. See topic list on daily blog.

September 9-10, Mon-Tues, 2019

I can demonstrate mastery over understanding of basic geometric terms by sketching, naming, measuring, and interpreting definitions (including algebraic application).

* Warm-up: review worksheet plus 2 sketches from board
* Take a grade on HW #8 – 4 pts (7-8 in some classes)
* Go over worksheet and homework/ questions.
* Popcorn questions – classify polygons (chart from p 50)
* Algebra practice – interpret midpoint or angle bisector (set equal)
* Quiz 1.1-4 – 40 pts
* HW catch up Geometric Truth: all terms on the board are entered with good sketches and labels (see blog post for list). A 5 pt grade will be taken next block.
* NO OTHER HOMEWORK!

Tues-Wed, Sept 11-12, 2019

Objective: I can discover, interpret, and apply angle pair relationships, including parallel lines and transversals.

* Write up definitions in Geometric Truth for triangle terms on pp 60-61 of old textbook, including sketches. (pp 56-57 of new book). Be sure to copy the good sketch for isosceles triangle (top of p 62 in old book, bottom of p 57 in new book). Isosceles: at least two sides congruent.
* Take a 5 pt grade on Geometric Truth. Fix and bring back if you do not get a 5/5.
* Preview: the process of investigate, write up, apply on homework by using what you now know to be true. You figure it out.
* Investigations 2.5.1-2 on pp 120-121. New book: pp 132-3.
* Write up C 1-2 on pp 120-121. Use sketches from investigations.
* Activity: naming angle pairs from top of p 126. (Make sure you know that the names exist whether the lines are parallel or not.) New book: p 138
* Investigation 2.6.1 – parallel lines and transversals – congruent CA, AIA, AEA. How to use patty paper and what it is useful for.
* Write up C-3 Parallel Lines (bottom of p 127 (p 139 in new book). Use sketch from investigation.
* HW #9 – pp 58-9: 1-7,12, p 134: 1-6 (answers only), p 141-2: 1-6 (name angle pair relationship that helps you (like CA, AIA, AEA, LP, VA).
* Is the converse of C-3 true? If you have congruent corresponding angles, then the lines will be parallel. This is C-4 on p 140, but don’t write it up yet.

Next quiz – 20 pts – end of class on Thurs-Fri next week

Unit Test – Sept 25-26 – 90 pts

September 13,16, Fri-Mon, 2019

I can interpret angle relationships and argue deductively to find reasons.

* Warm-up: p 132: 7 (p 142 in new book). Find each answers, give initials for angle pair that helped you find it.
* Geogebra sketch with non-congruent CA. What would make these lines parallel? Move lines to show that congruent CA yield parallel lines. Therefore, is the converse true for C-3? Is the converse true for C-1? C-2? Only 3.
* Warm-up: 4 lines with two transversals: name pairs, are lines parallel or not?
* Take a grade on HW #9 -4 pts. Finish grading Geometric Truth
* Go over warm-ups (answers on screen). Go over HW in detail.
* Use problems 5-6 from last page to approach new angle pair: same-sided interior. Explain why they must be supplementary if the lines are parallel.
* More explain why (what does it mean to argue deductively?) Explain with partner: if linear pairs are obviously supplementary (postulate), then why must vertical angles be congruent? Explain with partner: if vertical angles are congruent and corresponding angles are congruent, why must alternate interior angles be congruent?
* HW #10a – p 135:7-10,13, p 143:9-10, 13-15, 18-19. 10b – short worksheet attached on daily blog

Quiz Thurs-Fri block over angle pairs – 20 pts. Study Geometric Truth; can you recognize the pairs in a sketch? Multiple choice quiz next block.

Unit test (tentative): Wed-Thurs, Sept 25-26

September 17-18, Tues-Wed, 2019

I can use parallel line conjectures (CA, AEA, and AIA) as well as LP and VA to apply algebraically to find angle measures. I can explain why angles are congruent or supplementary if lines are parallel.

* Catch up GT through C-4 with sketching, making sure you have entered Supplementary Same-Sided Interior Angles as part of C-3 and 4. See attachment. Explain why they are supplementary.
* Warm-up: vocab matching activity (Ms Bogart checks)
* Open Response problem – 5 minutes on your own; then work with partner. Think: 8 pt problem!!! Explain.
* Warm-up: angle naming (name pairs, lines are not parallel, know when there is no name)
* Take a grade on HW #10 – 4 pts
* Share all HW and warm-ups
* One more “explain why”
* Multiple Choice Quiz online over angle pairs – 10 pts
* HW #11 worksheet quiz review –How to study for quiz. (View blog post.)

Quiz next block over Angle Pairs and transversals – 24 pts. Big test – Sept 25-26 – 90 pts

September 19-20, Thurs-Fri, 2019

I can demonstrate mastery over angle pairs, lines, and transversals. I can apply skills related to all vocabulary, sketching, and naming so far.

* Discuss “jumps” around a sketch. Angle 1 and 16 on warm-up are not AEA; you have to go around the sketch. Use this to do “Justify Each Step” activity.
* Explain why these lines must be parallel – problem on board
* Correct HW #11 worksheet, quiz hints
* Hand out review worksheet (HW #12). There are many textbook problems listed on the worksheet. Don’t ignore them!
* Hand out Test Topics
* Justify each Step activity
* Take a grade on #11
* Quiz 2.5-6 – 24 pts
* View MC quiz scores

Unit Test – Wed-Thurs, Sept 25-26, 90 pts

September 23-24, Mon-Tues, 2019

I can apply skills related to vocabulary, sketching, naming, labeling, and apply parallel lines conjectures with algebra and relationships. I can write a converse of a conditional statement.

* Write converse and determine truth value of four conditional statements.
* Take a grade on HW #12 (6 pts), can still get full credit next time.
* Self-check review worksheet answers.
* Sketching practice
* Algebra practice – linear pair, complementary angles, angle bisector
* 2nd & 3rd – last question on quiz if needed
* Multiple choice (3 questions from screen)
* Stop to check and correct everything so far.
* The other MC practice on desk (2 different sheets)
* Return both quizzes.
* How to study for tests (topic lists, review assignments, in-class work attached on website, geometric truth).
* Check everything.
* Finish HW #12, study for test. Help available Tuesday primetime.

Test Wed-Thurs, Building Blocks and Angle Pairs – 90 pts

September 25-26, Wed-Thurs

I can demonstrate mastery over building blocks and angle pairs content, including explaining why.

* Midpoint warm-up
* Questions
* Hints on circles. Assign daisy design from p 10, due next block. Pass out compasses.
* Unit Test – 90 pts