Geometry 2017 Right Triangle Daily Lessons

Tuesday, February 28, 2017

Objective: I can apply the Pythagorean theorem to find missing sides of right triangles and to determine if a triangle is a right triangle.

* Index card: make a sketch of a right triangle and write what you know about right triangles.
* Introduction and notes: Pythagorean Theorem. Look at sketch of right triangle with squares on each side. What does this have to do with the Pythagorean Theorem? Vocabulary: hypotenuse and legs. Use what you already know to find the hypotenuse if the legs are 3 and 4 cm.
* Notes: using algebra with the Pythagorean Theorem. Which one is c? Which are a and b? How do you solve for c? How do you solve for a and b?
* Practice: p 465: 1-6.
* Share/correct work. Look at the three that were exact. These are called triples. What if you wanted to figure out if three sides would make a right triangle. Put them in the PT and see if you get a true statement. Like this. Try one.
* Work on homework #16 handout. Work in your notebook. Due next class.

Thursday, March 2, 2017

Objective: I can apply the Pythagorean Theorem to real world situations.

* Formative assessment: find the missing side with algebra. 6 questions. Turn in for grade.
* Complete HW #16 if you have not already.
* Share answers popcorn to HW.
* Modeling – student sketch on board to match a story. How to set up to solve with algebra.
* Work on word-problem handout, sketch each problem. Turn in at end of class. IT IS HOMEWORK IF NOT COMPLETED AND TURNED IN.
* HW Quiz over HW #16 – 4 pts

Monday, March 6, 2017

Objective: I can apply the Pythagorean Theorem to real world situations. I can solve accurately with algebra. I can discover the ratio of certain sides in right triangles with a given acute angle.

* Warm-up: return last Thursday’s warm-up to discover mistakes. Mark the longest side as the hypotenuse.
* Collect Word Problem sheet from Thursday if not already turned in.
* How to show algebra. How to say if a triangle is right, acute, or obtuse.
* Pythagorean Practice for mastery (to prepare for quiz).
* Notes: identify opposite, adjacent, and hypotenuse sides for a given acute angle in a right triangle. Practice.
* Investigation: Discovering some special ratios in similar right triangles.
* Collect warm-up – 4 pts
* Share an investigation. Show how we will use it next time. QUIZ WEDNESDAY – PT.

Wednesday, March 8, 2017

Objective: I can demonstrate mastery over Pythagorean Theorem. I can apply ratios in similar right triangles.

* Warm-up: fix word problem sheet (HW #17)/ turn back in
* Questions over word problems?
* Finish investigation/ check for accuracy
* Apply investigation: 2 problems (do 1 together, try one)
* Handout: chart for opp/hyp and adj/hyp in multiples of 10 degrees (HW #18). Do one together. Try one. Finish for HW
* Quiz – Pythagorean Theorem – 20 pts

Friday, March 10, 2017

Objective: I can discover and apply trigonometric ratios in right triangles.

* Teacher led and help each other finish problems 1-6 on homework. Check in detail for errors. Explain in words what you are doing.
* Warm-up: find the ratios in a 3,4, 5 right triangle.
* Activity: investigation to write ratios like you are creating a table for certain angles. Use the tables to change to decimals, but first realize that the sine of an angle is the cosine of its complementary angle, and the tangent of an angle is the reciprocal of its complement’s tangent. Finish the chart and change to decimals, as well as figuring out which sides are which measures in the last problem. (this is HW #19, due Tuesday).

Aspire Interim on Tuesday next week. We will also do more work with trig ratios. On Thursday we will solve problems with trig ratios and then take a quiz before spring break.

Tuesday, March 14, 2017

Objective: I can understand relationships among the three trig ratios and find patterns in trig tables.

* ASPIRE Interim
* Investigation: trig ratio definitions, relationships, and patterns in trig tables.
* (Finish for homework.)
* Share answers to previous homework.
* Take a 4 pt grade on HW #19.
* Take a 5 pt grade on today’s note-building activity. If not finished, then finish for HW.

Short quiz next time on trig ratios.

Thursday, March 16, 2017

I can name trig ratios with the correct name, using them to solve problems about missing parts or ratios in right triangles.

* Warm-up: label sides opposite, adjacent, and hypotenuse. Solve equations for x.
* Glue definitions into notes; use to apply to problem solving.
* Using trig ratios in real world situations. How to write equations and solve. Use TI-84’s.
* Try these problems
* Quiz – 15 pts

Monday, March 27, 2017

Objective: I can apply trig ratios to solve problems about missing sides and angles. I can understand what the ratio in the calculator means.

* How to use calculator to find trig ratios. Pass out definition notes to absent students. SOH-CAH-TOA. What is the number and what does it mean?
* Simple equation practice – divide, multiply
* Textbook practice: p 624: 1-6. Find a trig ratio and round to 4 decimals. Solve a simple equation with a trig ratio in it.
* Pass out notes for practice: how to solve for one side given one side and one acute angle.
* Practice and check: p 625: 14-16, 18
* Trig table on screen. Problem 17 – how can we find missing angle. Use trig table.
* Process: solve for angle by finding inverse in calculator.
* Try problems 17 and 19 from p 625.
* Make-up issues for advisory tomorrow.

Assessment on Friday, April 8 over right triangle trigonometry and Pythagorean theorem.

Wednesday, March 29, 2017

Objective: I can apply trig ratios to solve real world problems.

* Tangent Tree Height Activity outside; share and figure when returning inside.
* Partner solve: make a sketch to match a story, then use trig ratio to solve.
* Take photos of completed work for credit.
* HW #1 – kuta worksheet – practice finding missing sides and angles of right triangles.
* Make-up issues or view quizzes.

Monday, April 3, 2017

Objective: I can apply skills related to sine, cosine and tangent ratios and the Pythagorean Theorem.

* Finish/correct HW #1
* Share answers/questions/collect HW #1
* Work on unit review in class.

Test Friday, April 7, Right Triangles – 50 pts

Wednesday, April 5, 2017

Objective: I can apply skills related to sine, cosine, and tangent ratios

* Collect HW #1 – 4 pts
* Partner work – finish review – show work, answer questions. Collect if finished. Otherwise, due Friday.
* Clock appointment activity – application with trig ratios
* HW #3 – trig ratio word problems
* Pass out test topics
* Quiz make-up issues

Test Friday, Right Triangle Unit – 50-60 pts

Friday, April 7, 2017

Objective: I can demonstrate mastery over Pythagorean theorem and right triangle trigonometric ratios.

* Check/correct/questions HW #2-3
* Collect each for 4 pt grade
* Right Triangle Test – 50 pts
* NO HOMEWORK