Pythagorean Theorem Student Webquest Worksheet Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

***First Quest*:** *Mastering the Basics - In this section, you will learn to classify triangles according to their angles and sides.*

**Click on the first** [**Link (#1)**](https://www.mathsisfun.com/triangle.html) **in the webquest to begin completing your worksheet.**

1. **What is the sum of the angles of every triangle? \_\_\_\_\_\_\_\_\_\_.**
2. **A triangle which all the sides have the same length is called a \_\_\_\_\_\_\_\_\_\_\_\_\_\_triangle.**
3. **A triangle with two sides having the same length is called a \_\_\_\_\_\_\_\_\_\_\_\_\_ triangle.**
4. **A triangle in which none of the sides have the same length is called a \_\_\_\_\_\_\_\_\_\_\_ triangle.**
5. **A triangle with a 90 degree angle is called a \_\_\_\_\_\_\_\_\_\_\_\_\_ triangle.**
6. **A triangle with an angle greater than 90 degrees is called an \_\_\_\_\_\_\_\_\_\_\_\_triangle.**
7. **A triangle in which none of the angles are greater than 90 degrees is called an \_\_\_\_\_\_\_\_\_\_\_\_\_\_ triangle.**
8. **A triangle in which all of the angles are congruent to each other is called an \_\_\_\_\_\_\_\_\_\_\_\_\_\_ triangle.**

**Go to the next** [**Link (#2)**](http://www.aaamath.com/g8-513-triangle-angles.html) **to answer the following questions. Scroll down to timed test part.**

1. **How many triangles were you able to correctly classify in 60 seconds by their angles? \_\_\_\_\_\_\_\_\_\_\_. Make sure to share this score with your teacher before you go on.**
2. **Can you beat your own record? How many did you correctly classify this time?**

**\_\_\_\_\_\_\_\_\_\_\_\_. Make sure to share this score with your teacher before you go on.**

**Go to the next** [**Link (#3)**](http://www.aaamath.com/geo318-triangle-sides.html)

1. **How many triangles were you able to correctly classify in 60 seconds by their sides? \_\_\_\_\_\_\_\_\_. Make sure to share this score with your teacher before you go on.**
2. **Can you beat your own record? How many did you correctly classify this time?**

**\_\_\_\_\_\_\_\_\_\_\_\_. Make sure to share this score with your teacher before you go on.**

**Go to the next** [**Link (#4).**](http://www.aaamath.com/geo612x5.htm)

1. **This one will slow you down! How many third angles were you able to correctly identify in 60 seconds? \_\_\_\_\_\_\_\_\_\_\_. Share your results with teacher before going on.**
2. **Try it again! How many? \_\_\_\_\_. Share your results with teacher before going on.**

# *Second Quest: Mastering the Pythagorean Theorem*

*In this section you will learn about a powerful formula for working with right triangles and practice using it to solve practical problems.*

**Go to the next** [**Link (#5).**](http://www.pbs.org/wgbh/nova/proof/puzzle/)

1. **The Pythagorean Theorem is a powerful tool for finding the length of the third side of a right triangle when the other two sides are given. The Pythagorean Theorem (formula) is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, where A and B are the legs for the triangle and C is the hypotenuse (always directly across from the right angle).**
2. **Below is an Example of using the Pythagorean Theorem to find the length of the third side of the right triangle described below. Round your answer to the nearest tenth.**

One side is 7, the second side is 12, how long is the hypotenuse?

72 + 122 = C249 + 144 = C2193 = C2

Use your calculator to find the square root of 193 and, of course, the square root of C2 is just C so...
13.89 = C

**\*\*\*\*Now you try it. Given a right triangle with one side 8 meters, and the second side 6 meters, how long is the hypotenuse?\_\_\_\_\_\_\_\_\_\_\_\_\_ meters. Show work.**

**Go to the next** [**Link (#6)**](http://www.pbs.org/wgbh/nova/proof/puzzle/ladder.html)

1. **Solve the Ladder problem and Enter the answer here: \_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Show work and label answer. Round answer to the nearest whole #.**

**Go to the next** [**Link (#7)**](http://www.pbs.org/wgbh/nova/proof/puzzle/baseball.html)

1. **Solve the Baseball problem. How far did you have to throw the ball? \_\_\_\_\_\_\_\_\_**

**Show work and label answer. Round answer to nearest hundredth.**

***Third Quest*: *Review on how to apply the Pythagorean Theorem***

**Complete** [**Worksheet**](Review%20Problems%202-11%20from%20Webquest%20about%20Pythagorean%20Theorem.docx) **“Working with Pythagorean Theorem” (Get copy from teacher). You must show work and label answers.**

1. **After completing the above worksheet, show work to teacher. Teacher will give you the O.K. to go to this Link** [**(Review)**](http://www.regentsprep.org/regents/math/algebra/at1/pracpyth.htm) **and check your answers.**

***Fourth Quest*: *Solving the Mysterious Bermuda Triangle***

***In the final section you will research the Bermuda Triangle and offer a logical explanation for a mysterious disappearance.***

**Go to the next** [**Link (#8)**](http://www.english-online.at/places/bermuda-triangle/bermuda-triangle-facts-myths.htm)**.**

1. **What has happened in the Bermuda Triangle that has given it a**

 **mysterious reputation? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

1. **Give three possibilities to explain why so many ships disappeared in this area.**
2. **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**2)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**3)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Go to the next** [**Link (#9)**](http://www.worldatlas.com/aatlas/infopage/bermudat.htm)**.**

1. **Although the area is called the Bermuda Triangle, there is a disagreement about the exact location and shape. Using the map on this link give the location of the apexes of the triangle.**

**From \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

1. **When classified by its sides, what type of triangle does the Bermuda Triangle most closely resemble on the given map? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
2. **When classified by its angles, what type of triangle does the Bermuda Triangle most closely resemble on the given map? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Go to the next** [**Link (#10)**](http://www.bermuda-triangle.org/html/theories.html) **and read some of the theories offered to explain the disappearances (click Items listed under “Theories on the left-hand side of the screen). Using this information, choose one of the missing ships from** [**Link (#11)**](http://www.bermuda-triangle.org/html/missing_vessels.html) **and explain the disappearance according to the directions in question 25.**

1. **Choose a ship from the list, print out (optional) the description of the incident and write an essay explaining what could have happened. Be sure to support our explanation with facts from the theories link. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**