**Using Tangrams to study geometric shapes!**

Name:

Date:

What is a Tangram and what Nation is responsible for its creation? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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 **Working Along with the Online Resource:** [**http://www.linkslearning.k12.wa.us/kids/1\_math/2\_illustrated\_lessons/7\_Tangrams/index.html**](http://www.linkslearning.k12.wa.us/kids/1_math/2_illustrated_lessons/7_Tangrams/index.html)Watch the video to learn how to construct your tangram. Tape your puzzle together. Use what you are learning in the video to answer the questions below.

 Define the term: Congruence - \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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1. After making your two smaller triangles, choose one to label:

Write the kind of triangle it is in the center

Choose a vertex and make two rays from it. Name the rays. Then draw the symbol for an angle and name the angle that you created.

Use a protractor to find the measure of each of the three angles and label each angle correctly.

1. What defines a trapezoid? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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1. If you draw a diagonal line from one of the top vertices of a trapezoid, what two polygons will you make?

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1. What is a parallelogram? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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1. How many right triangles can you make from the space inside the parallelogram you made? \_\_\_
2. What are the rules for using the Tangram pieces to make a figure? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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1. Use the square that you made to do the following:

Label one vertex (with the word vertex)

Write the word corner at another vertex

Choose a vertex to be an endpoint for two rays. Draw the endpoint, draw the rays and label them.

Choose the last vertex; find the measure of its angle. Name the angle and give its measure.

**Using Tangrams to study geometric shapes!** Extension Activity:

1. How many sets of congruent triangles did you create from this exercise?
2. Choose 3 NON-congruent triangles from the set of Tangrams that you made an label them- A, B, and C.
3. What kind of triangles are they?
4. Find the measure of each side of each triangle and report them in both centimeters and inches.
5. Divide the number of centimeters by the number of inches and report you answer as a ratio.
6. Go on-line and find the conversion factor for centimeters to inches. Do you find a connection between your ratio and the conversion factor? If yes, explain

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