

Trying Out Tangrams. Hands-On Geometry Part 2

For 2nd Grade

Math Learning Goals:

- Recognize and identify shapes with a given number of angles and a given number of equal faces.
- Define and identify triangles, quadrilaterals, and polygons.

Materials Needed:

- Tangrams
- Scissors for cutting out Tangrams
- Trying Out Tangrams Worksheet



Review:

Begin the second day with a review of the previous day's learning by placing 4 geoboards numbered 1 - 4 in the front of the room (1) with a right triangle, (2) with a trapezoid containing a right angle, (3) with a rectangle, and (4) with a hexagon with two parallel sides. Ask the following questions and have students explain their answers:

- Which shape (or shapes) has at least one right angle? [1, 2, and 3]
- Which shape (or shapes) is a quadrilateral? [2 and 3]
- Which shape (or shapes) has parallel sides? [2, 3, and 4]

Tangrams Activity:

Divide students in pairs. Distribute tangrams and a Trying Out Tangrams Activity Sheet to each group. Give students scissors to cut out tangram pieces. While students complete the worksheet, circulate the room and make sure each student is contributing to the work. Also, facilitate any disagreements, help struggling students, and check for comprehension.

Once students have completed the activity sheet, ask them to team up with another pair of students. Have them each take turns sharing their shapes. Bring the class back together again to discuss the tangrams activity and its connection to the geoboards lesson, including a review of the vocabulary.

TN Math Standards 2nd grade

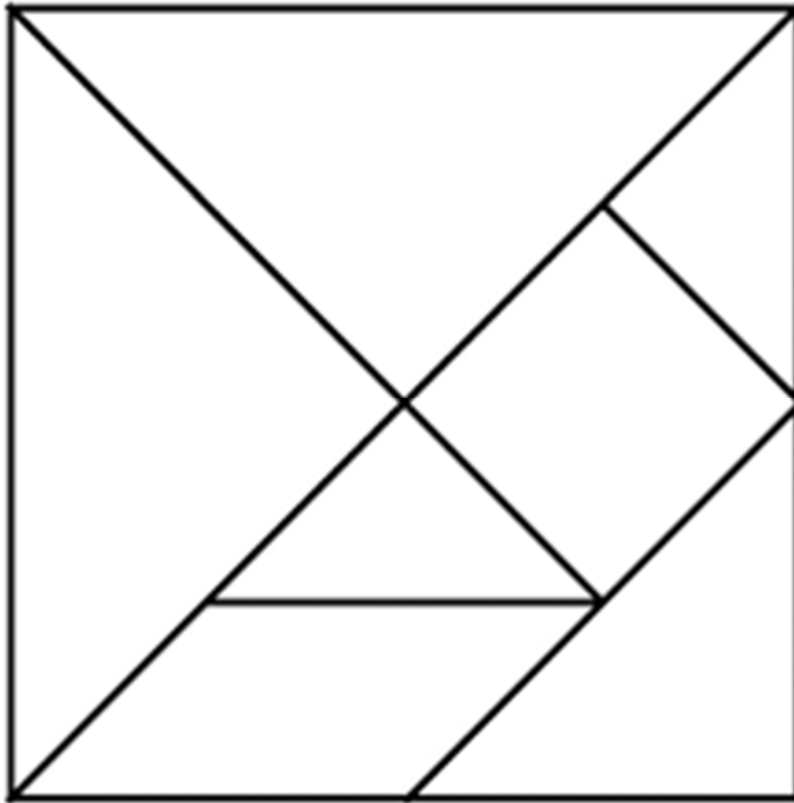
Geometry: Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces. Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.

Source: National Council of Teachers of Mathematics. Trying Out Tangrams: Applying Knowledge of Geometry Vocabulary.

Adapted for 2nd grade by Virginia Parkman and Suzanne Lenhart

Trying Out Tangrams!

Directions: Cut out the tangrams pieces along the black lines. You will have seven tangram pieces.



Trying out Tangrams

Using 2 or 3 tangram pieces, make the specified shape. Then, trace your shape in the space provided by tracing each tangram piece.

1.) Use 2 tangram pieces to make a quadrilateral that has 4 right angles and 2 sets of parallel sides.

2.) Use 2 tangram pieces to make a quadrilateral that has 2 sets of parallel sides and no right angles.

3.) Use 2 tangram pieces to make a quadrilateral that has exactly 2 right angles and exactly 1 set of parallel sides.

4.) Use 3 tangram pieces to make a triangle that has 1 right angle.

5.) Use 3 tangram pieces to make a quadrilateral that has 4 right angles and 2 sets of parallel sides.

6.) Use 3 tangram pieces to make a quadrilateral that has no right angles and 2 sets of parallel sides.

Answer Key

Trying out Tangrams

Using 2 or 3 tangram pieces, make the specified shape. Then, trace your shape in the space provided by tracing each tangram piece.

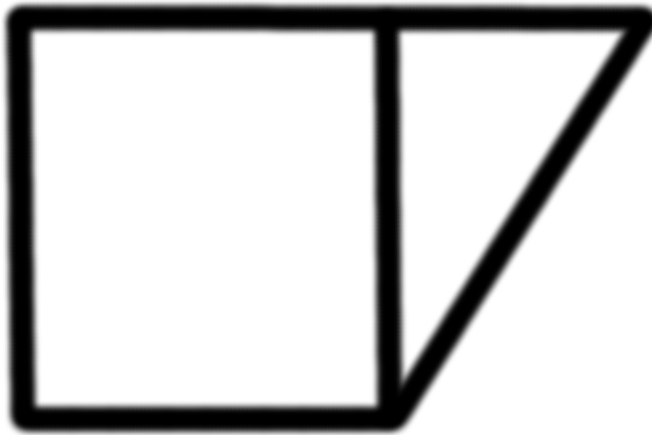
- 1.) Use 2 tangram pieces to make a quadrilateral that has 4 right angles and 2 sets of parallel sides.



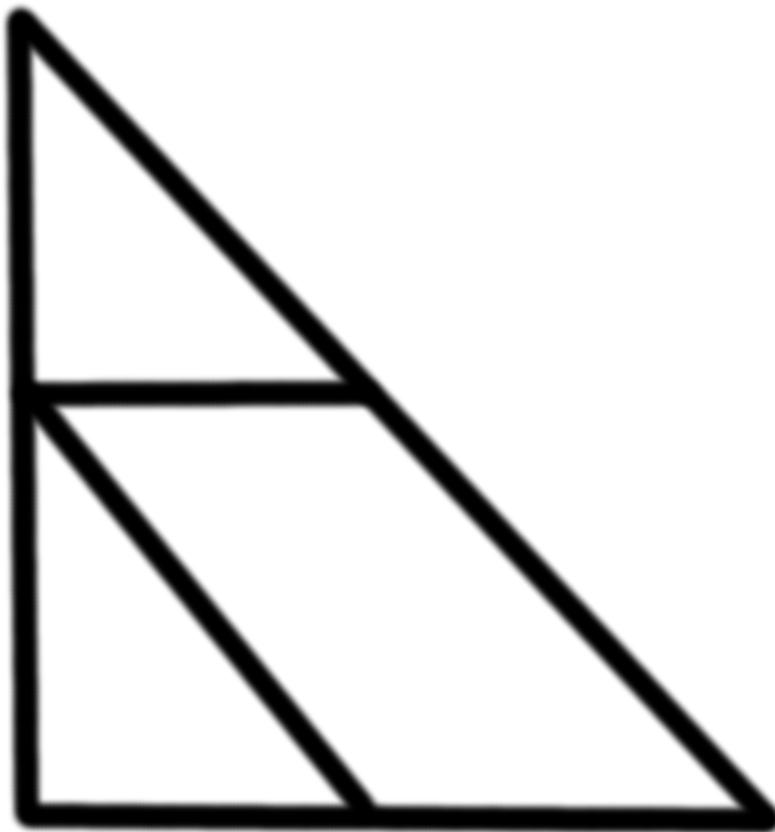
- 2.) Use 2 tangram pieces to make a quadrilateral that has 2 sets of parallel sides and no right angles.



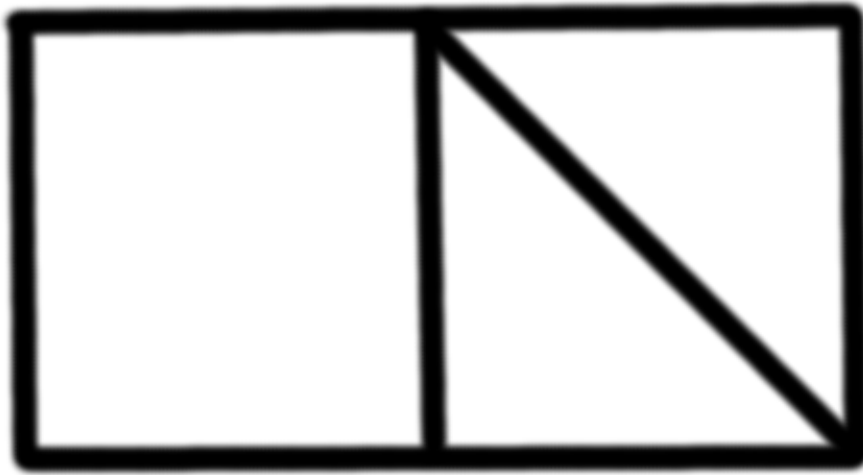
3.) Use 2 tangram pieces to make a quadrilateral that has exactly 2 right angles and exactly 1 set of parallel sides.



4.) Use 3 tangram pieces to make a triangle that has 1 right angle.



5.) Use 3 tangram pieces to make a quadrilateral that has 4 right angles and 2 sets of parallel sides.



6.) Use 3 tangram pieces to make a quadrilateral that has no right angles and 2 sets of parallel sides.

