







Project Recording Sheet**Geometric Relationships****Tile Artistry**

Complete the table.

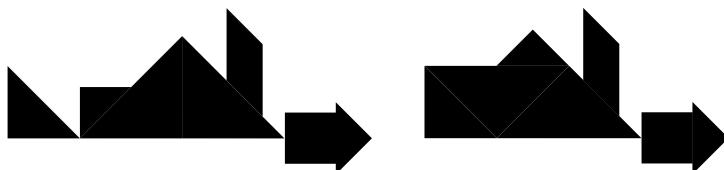
Possible shapes and descriptions are given.

Triangle	Shape	Description
Equilateral		All sides and angles the same
Isosceles		Two sides and angles the same
Scalene		All sides and angles different
Obtuse		One wide angle
Acute		All narrow angles
Right		One square angle

Create each of the following designs.

1. A design made up of congruent polygons.
2. A design made up of similar, but not congruent polygons.
3. A design made up of two kinds of polygons. (The pieces should fit together without gaps or overlaps.)
4. A design made up of irregular polygons.

Extension: Use a Tangram set to construct the figures below. Both figures can be made by using all seven pieces with no overlaps.



Project Teacher Support

Geometric Relationships

Career: Artist

Background

Students will use polygons, geometric patterns, congruence, symmetry, transformations, and tessellations in order to solve problems.

Lesson Connections

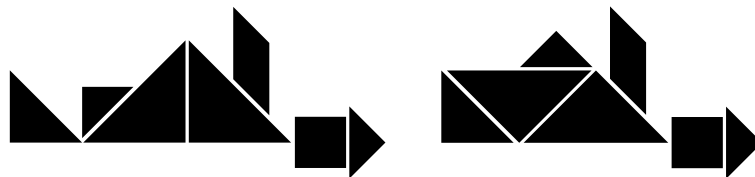
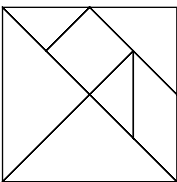
8-5, 8-6, 8-8, 8-9, 8-10, 8-11

Answers to Research Questions

- Regular polygons have sides the same length and vertex angles the same measure. Irregular polygons have the same number of sides, vertices, and total interior degrees, but the sides and angles are unequal.

Project Recording Sheet Tips

Creating the designs will give students practice with congruent and similar figures, symmetry, and transformations. Give the students the opportunity to share their designs and discover patterns. Use commercial Tangram sets or have students make their own sets using the model below.



Assessment Rubric

Assessment Rubric	
4	Completed all sections. Analyzed all figures and created clear descriptions. Created all designs accurately. Successfully solved the extension puzzle.
3	Completed all sections. Analyzed all figures and created clear descriptions. Created all designs.
2	Completed most sections. Analyzed figures and created partially clear descriptions. Created some designs.
1	Partially completed the project recording sheet. Partially analyzed figures and created descriptions. Partially completed the designs.