

Angles and Building Shapes

Math 1, Unit 5

Anaheim Union High School District

Dear Student & Parent/Guardian,

In this unit we explore different angle and shape relationships by building on a foundation of angle measurement from elementary school. Explorations will include:

- Building triangles out of spaghetti!
- Rolling 10-sided dice to determine if 3 lengths could comprise the sides of a triangle!
- Discovering if a triangle can have more than one obtuse angle!

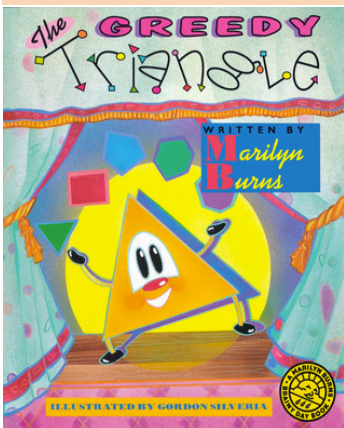
-AUHSD Math Teachers

Why are we studying this?

Angles and shapes are a part of our everyday lives, from the shape of paper to the shapes used to create the It's a Small World ride, to the angles and side lengths needed to create a stained glass window. In order to communicate about the things you use or see every day, you need to be able to know and use the names of shapes correctly. Knowing how to identify shapes can make describing things easier.



Sample question:



“If a triangle added a side and an angle and became a quadrilateral, and then added a side and became a pentagon and continued a process of changing in this same pattern, would the triangle ever transform into a perfect circle? How?” Why or why not?”

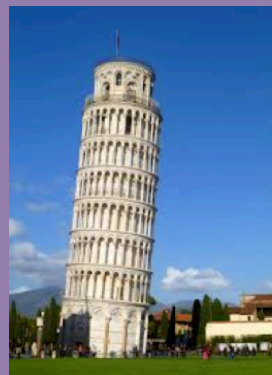
Will the given side lengths make a triangle?

3cm

4cm

5cm

Real World Applications in this Unit

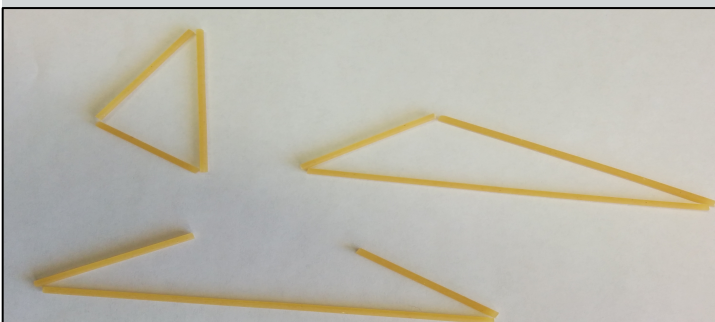


Task: Using the picture of the Leaning Tower of Pisa, label where you think the following are:

- the 3.99° angle at which the tower currently leans
- where the tower would be if it reached the maximum lean angle of 5.5°

A Note About Homework

Homework in this unit will contain a spiral review of topics previously learned in Math 1 as well as topics concurrent with the unit of instruction.



When will three side lengths comprise a triangle?

Essential Questions Addressed in this Unit

- Can a triangle have more than one obtuse angle?
- Do any three side lengths comprise a triangle?
- How many degrees comprise the interior angles of a triangle?
- How do I set up and solve an equation to find missing angle measures?