

Lesson 2: Ways to Look at Triangles

Standards Alignments

Addressing 4.G.A.2, 4.NF.B.3.c, 4.NF.B.4

Teacher-facing Learning Goals

- Classify triangles based on their side lengths and size of their angles.

Student-facing Learning Goals

- Let's sort and analyze triangles.

Lesson Purpose

The purpose of this lesson is for students to classify triangles based on their side lengths and the size of their angles. Students identify triangles with a right angle as right triangles.

In the previous lesson, students sorted and categorized two-dimensional shapes using any attribute of their choice. In this lesson, students narrow the set of shapes to triangles. They analyze and sort triangles based on their sides and angles.

Along the way, students begin to notice new attributes of triangles and make generalizations about them. They know that all triangles have three sides and three angles. Now they also see, for instance, that some triangles contain right angles, some triangles have equal sides and can be folded into two equal halves, triangles never seem to contain more than one obtuse angle, and so on. Students learn that **right triangles** are a sub-group of triangles and use what they know about identifying right angles and perpendicular sides to identify the properties of right triangles.

The process of sorting shapes and identifying attributes encourages students to look for structure (MP7), which students will use in later lessons to reason about symmetry and measurements in two-dimensional figures.

Access for:

Students with Disabilities

- Action and Expression (Activity 1)

English Learners

- MLR8 (Activity 1)

Instructional Routines

Number Talk (Warm-up)

Materials to Gather

- Index cards: Activity 2
- Materials from a previous lesson: Activity 1
- Patty paper: Activity 2
- Protractors: Activity 1, Activity 2
- Rulers: Activity 1

Lesson Timeline

Warm-up	10 min
Activity 1	25 min
Activity 2	10 min
Lesson Synthesis	10 min
Cool-down	5 min

Teacher Reflection Question

What question went unanswered in this lesson?
How will you revisit the ideas underlying this question in the lessons that follow?

Cool-down (to be completed at the end of the lesson)

🕒 5 min

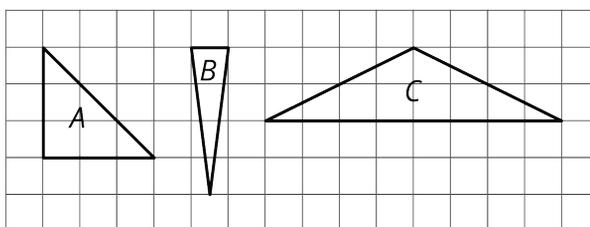
Which Would Fit in the Set?

Standards Alignments

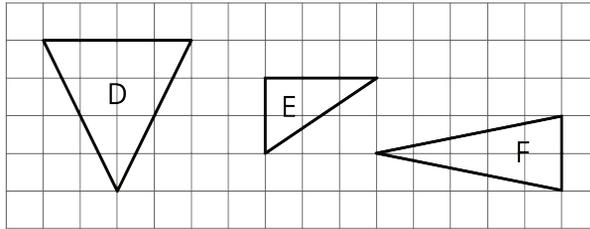
Addressing 4.G.A.2

Student-facing Task Statement

Here is a set of triangles that share an attribute and belong together.



1. Which of the following triangles have the same attribute and would also fit in the set? Explain your reasoning.



2. Which of the six triangles are right triangles?

Student Responses

1. Sample response: Each triangle has two sides that have the same length (or have two angles that are the same size).
 - a. Triangle D, because the left and right sides are the same length (or because two of the angles are the same size)
 - b. Triangle F, because the two longer sides are the same length (or because two of the angles are the same size)
2. Triangles A and E