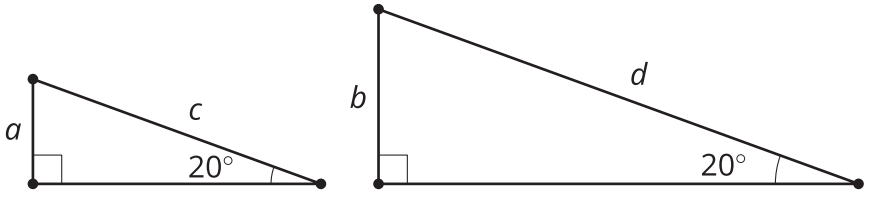
Unit 4 Lesson 4: Ratios in Right Triangles

1 Ratio Rivalry (Warm up)

Student Task Statement



Consider $\frac{a}{c}$ and $\frac{b}{d}$. Which is greater, or are they equal? Explain how you know.

2 Tons of Triangles

Student Task Statement

Your teacher will give you some angles.

1. Draw several right triangles using the angles you receive.
2. Precisely measure the side lengths of the triangles.
3. Complete the tables by computing 3 quotients for the acute angles in each triangle:
    a. The length of the leg adjacent to your angle divided by the length of the hypotenuse
    b. The length of the leg opposite from your angle divided by the length of the hypotenuse
    c. The length of the leg opposite from your angle divided by the length of the leg adjacent to your angle
4. Find the mean of each column in your table.
5. What do you notice about your table? What do you wonder about your table?

3 Tons of Ratios

Student Task Statement

1. Compare the row for 20 degrees and the row for 70 degrees in the right triangle table. What is the same? What is different?

2. The row for 55 degrees is given here. Complete the row for 35 degrees.

angle	adjacent leg ÷ hypotenuse	opposite leg ÷ hypotenuse	opposite leg ÷ adjacent leg
35°			
55°	0.574	0.819	1.428

3. What do you know about a triangle with an adjacent leg to hypotenuse ratio value of 0.839?