

Class Activity

Finding Least Common Denominators

Objectives:

1. The teacher will explore using Cuisenaire Rods to determine the Least common Denominator of two unlike fractions.

TOPIC: FINDING THE LEAST COMMON DENOMINATOR [FINDING LCMs]

➤ **Materials: CUISENAIRE RODS**

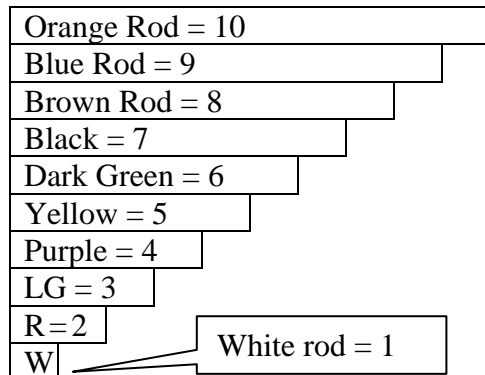
1. As a group, use Cuisenaire Rods and work through these steps to find the LCM (6, 8).

Our Goal:

We wish to find the LCM (6, 8). We need to find a Cuisenaire Rod train that is:

- i. A multiple of 6
- ii. A multiple of 8
- iii. The smallest (shortest) train that will work.

It turns out that finding the LCM is extremely easy to model with Cuisenaire Rods using the numbering with the white rod as 1:



Use Cuisenaire Rods to model throughout this problem. Sketch and label pictures as directed

- a. If the Dark Green Rod is 6, then all trains made of Dark Green Rods represent numbers that are:

_____ of 6

Starting Sketch:

- b. If the Brown Rod is 8, then all trains made of Brown Rods represent numbers that are:

_____ of 8

Starting Sketch:

- c. If the Dark Green Rod is 6 and the Brown Rod is 8, then **ALL** same-length trains that can be made of all Dark Green OR all Brown Rods represent numbers that are:

Starting Sketch:

- d. If the Dark Green Rod is 6 and the Brown Rod is 8, then **THE SHORTEST** same-length trains that can be made of all Dark Green OR all Brown Rods represent the number that is:

Sketch:

- e. This train is _____ whites long, therefore _____ is the LCM of 6 and 8.

At this point you should have trains that look like this on your table.

DARK	GREEN	RODS	DG
BROWN	RODS	BR	

- Since the white rod is 1, these trains are both 24 whites long and they both represent $24 = \text{LCM}(6, 8)$
2. As a group, use Cuisenaire Rods and determine the LCM (16, 24). Step out your work and draw well-labeled sketches. What's One?

3. Suppose that you wish to explain how to find the **LEAST COMMON MULTIPLE** of two numbers to a student. Using the above steps as a general guide, explain how you would share finding the LCM(4, 6) with a student. Discuss this with your group members and show all of the (completed) steps here.