

Making Connections: Stacking Cups

Methods

Tables

Blue Stack

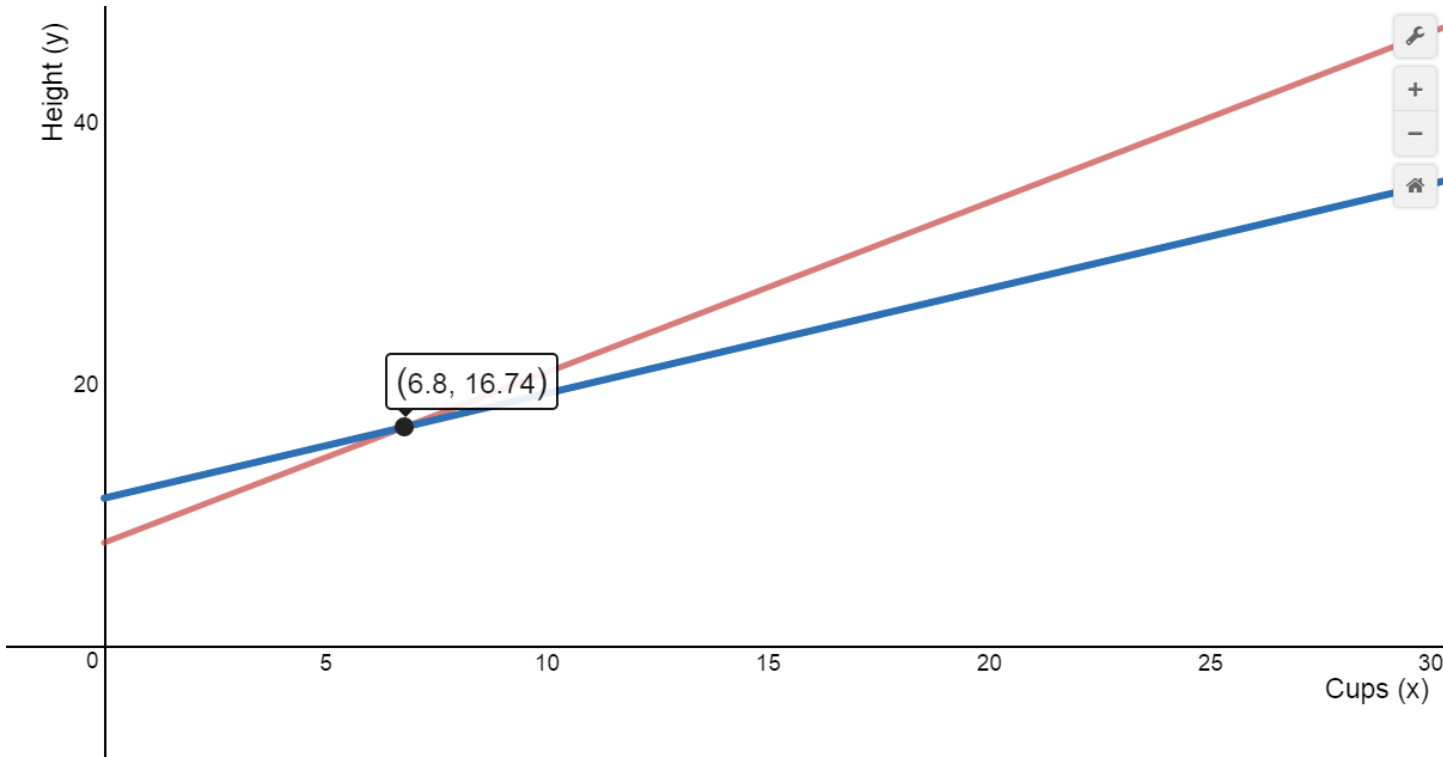
Cups	Height

White Stack

Cups	Height

Equations

The **PURPOSE** for this activity... **Systems of Equations**



What it might look like on a test:

A man was trying to determine how many cups it would take for two stacks to be equal in height. The blue stack contained cups with a base measuring 11.3 cm and a rate of change of 0.8 cm. The white stack contained cups with a base measuring 7.9 cm and a rate of change of 1.3 cm. So, what do you think? How many cups will need to be in each stack to be equal height?

What does the point of intersection represent in this situation?

What would represent the y-intercept for each type of cup? How did these affect the graphs and tables?

What would happen if both functions had the same rate of change?

Big Ideas

- **Big Idea 1: Systems of Equations contain functions that share the same set of variables.**
 - **Example from problem:**

- **Big Idea 2: A solution simultaneously makes each function rule in a system of equations true.**
 - **Example from problem:**

- **Big Idea 3: The solution to a system of equations can be represented in multiple, equivalent ways.**
 - **Example from problem:**