

Continuous Beams

Description

This project uses observation to understand the behavior of beams continuous over multiple supports.

Goals

To observe the behavior of continuous beams under different loadings

To estimate locations of contraflexure and effective lengths

To determine areas of positive and negative moment based on curvature

Procedure

1. Using the 24 inch stick, position the supports and loads (with your finger) as shown in the diagrams below. Hold the beam down on the reactions if it lifts up.
2. For each case observe and draw the elastic curve.
3. Label + and - curvature (moment) and points of contraflexure.
4. Estimate the effective lengths, ℓ_e , across the beam. (between points of $M=0$)

