# Unit 1: Number Sense  Lesson: How Tall? From: The Futures Channel

**Estimated Time of Lesson:** 1-2 classes

**Objective(s) of the lesson:**  
(What the students will learn and know):

Students will be able to solve a proportion for an unknown. Students will also be able to apply this knowledge to find the height of objects that are not easily measurable.

**Standard:** 8.N.3 Ratios and Proportions

**Key Vocabulary:**

Ratio, proportion, fraction

**Materials (for each team):** ruler, yardstick, 50 feet of string, pencils, paper, handout

**Correlating Book and Chapter:**

**Activities that addresses the objectives:** (What the students will do)

1. Introduce objectives
2. Mini-lesson:
   a. Brainstorm with the students what they know about ratios and proportions.
   b. Show an example of how to solve for an unknown using a proportion.
   c. Bring two students to the front of the room to model the procedure on the handout, and work through the solution of the proportion with the class.
3. Activity:
   a. Break the students up into teams of three.
   b. Distribute the handout and discuss it.
   c. Students repeat the procedure they saw modeled in front of the class with their groups, finding the height of the three group members.
      1. “Describe how you could use the procedure to find the heights of their friends and the height of the door?”
   d. Afterwards, to reinforce the knowledge of finding the height of something we can easily measure, and to find the height of the school for the scale model, take the students outside and use this technique to find the height of the High School
4. Wrap-up
**Assessment(s): (How the students will know if they have done a good job in meeting the objectives)**

Students will be assessed with the completion of the proportions to solve the unknown heights of their fellow classmates, and then will be further challenged to find the height of the school building and trees outside.

**Homework/ Reinforcement:**

Worksheet on ratios and proportions

**Teacher Reflection: complete after lesson**