

Reach for the Sky

Developed/Adapted By

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One sentence description of the assignment or activity

Students use similar triangles and shadows to approximate the heights of trees, buildings, and other landmarks.

Course for which this is used

- PreAlgebra (Math 0950)
- Beginning Algebra (Math 0990)
- Intermediate Algebra (Math 1010)
- College Algebra (Math 1050)

Key topics taught in this activity

Similar triangles, proportions

Prerequisites

Solving one variable linear equations.

Lesson Plan – Detailed Description

Armed with the knowledge that similar triangles have proportional sides, students will utilize shadows lengths and similar triangles to approximate the size of tall landmarks. An introduction describing the uses of similar triangles for such approximations is typically helpful at the beginning of class. The teacher may also opt to discuss the use of trigonometry in height approximations of large landmarks as well. Then students will spend their time outside taking measurements as necessary on their assignment sheet. The teacher may opt to divide the students into small groups of 2 or 3 for this activity. Several measuring tapes would be helpful though simply pacing of the lengths could work in a jam.

Activity Grading/Assessment

The assignment sheet and activity participation could both be used to compute the grade for the activity.

Class Time Required

50 minutes

Out-of-Class Time Required

None

Materials Required

Measuring tapes
Assignment sheet
Pencil

Supplemental Web Resources

None