**Problem of the Week**

This week we have a couple of geometric constructions to try. The usual rules apply: Constructions must be done using only a (uncalibrated) straight-edge and compass.

53. Given two intersecting lines, and a point \( P \) on exactly one of them, construct a circle that is tangent to both lines, with the point of tangency on one line being \( P \).

![Diagram](image)

54. a) Given a triangle with horizontal base, construct a line parallel to the base that divides the triangle into two pieces of equal area.

![Diagram](image)

b) Can you construct four lines parallel to the base that divide the triangle into 5 pieces of equal area?

How the Problem of the Week works:

1. **Any Calvin Student** is invited to participate in the Problem of the Week on any week. Solutions (or partial solutions) may be submitted by individual students or by groups of students.

2. **Copies** of the Problem of the Week will be hung on the bulletin board outside the Department office and in various locations around the Department of Mathematics and Statistics. Additional copies are available in one of the boxes outside the office and on the web at [http://www.calvin.edu/~rprui/pow/](http://www.calvin.edu/~rprui/pow/)

3. **Solutions** to this problem are due on **March 28**. Solutions should be turned in to Professor Pruim (NH 284). Be sure to include your name(s) on your paper.

4. **A list of solvers and example solutions** will be posted on the bulletin board outside the Mathematics Department office.