
Problem of the Week

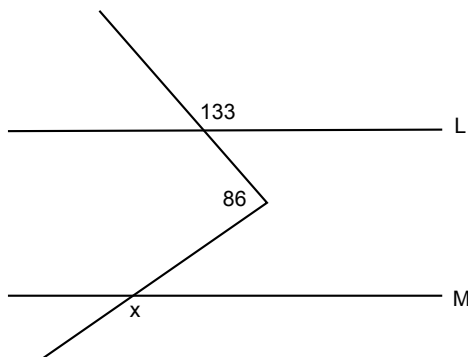
Number Two

February 2, 2015

In Alfred Hitchcock's 1946 film *Spellbound*, Gregory Peck plays a doctor with no memory of his last few days. Ingrid Bergman is the psychoanalyst trying to help him. Periodically throughout the film, Peck is suddenly overcome with fear, causing him to faint. Bergman eventually realizes that it is the sight of parallel lines against a white background that brings on this fear. This leads to a suitably dramatic moment where Bergman grabs Peck and yells, "Why does *the color white* frighten you? Why do *lines* frighten you?"



I'm not going to tell you why parallel lines frightened him. Go see the movie, but be warned that it was made at a time when, unlike today, the characters in films actually spoke to each other for minutes at a time. Also, black and white. As it happens, though, this week's problem involves parallel lines! Hopefully you will not find them as frightening as Peck did in the film. Here we go:



In the diagram to the left, lines L and M are parallel. Given the two angles as marked, find the measure of angle x .

Submissions are due to Jason Rosenhouse by 5:00 on Friday, February 6. Solutions should be written on the back of an official POTW handout. Place your name, e-mail address, and the section numbers and professors of any math courses you are taking, in the upper right corner of the front of the page. One weekly winner will receive a five-dollar gift card from Starbucks. To be considered correct, your answer to the problem must be accompanied by a clear, concise explanation. Solutions will be posted at this website, by the Monday after the problem is due:

<http://educ.jmu.edu/~rosenhjd/POTW/Spring15/homepage.html>