
Problem of the Week

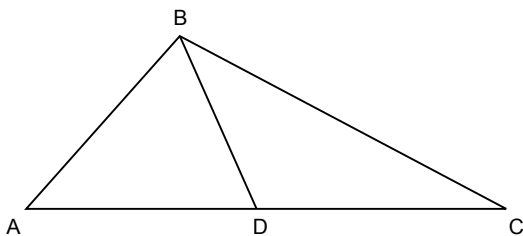
Problem Six

March 16, 2015

The Angles were a group of people of Germanic origin which rose to some prominence shortly after the fall of the Roman Empire. In the fifth century CE, they were one of several groups of people to invade the island of Britain. (They were joined by the Saxons, among other groups, hence the term “Anglo-Saxon.”) An alternative spelling of their name is “Engles,” and they lent their name to what we now call “England.”

That’s right! Angles were central to the formation of England. And since England was central to the founding of the United States we see, by the transitive property of civilization foundation, that Angles were central to the founding of the United States,

As it happens, angles are also central to this week’s problem. Since you have had spring break to recharge your batteries, the problems will be getting a bit tougher from here on out. But give it a try anyway!



In the diagram to the left, we are given that $\overline{AB} = \overline{AD}$. We are also given that $\angle ABC - \angle ACB = 30$. Find $\angle CBD$.

Submissions are due to Jason Rosenhouse by 5:00 on Friday, March 20. 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>