

Cal Poly Department of Mathematics

Puzzle of the Week

Apr 18-29, 2011

An imaginary line ℓ runs east-west and divides a large field in two. Land north of ℓ is worth 10 dollars per square foot while land south of ℓ is worth only 4 dollars per square foot. There is an oak tree growing 20ft south of ℓ and enclosed by 100ft of fence. To the nearest whole dollar what is the maximum possible value of the land within the fence?

Notes: Take the oak tree to be a single point; you might as well assume the fence begins and ends at the tree. In your solution proof is not required for credit.

Solutions should be submitted to Morgan Sherman:

*Dept. of Mathematics, Cal Poly
Email: sherman1 -AT- calpoly.edu
Office: bldg 25 room 310*

before next Friday. Those with correct and complete solutions will have their names listed on the puzzle's web site (see below) as well as in next week's email announcement. Anybody is welcome to make a submission.

<http://www.calpoly.edu/~sherman1/puzzleoftheweek>