

Problem 20: Radical Sums

USMA D/Math Problem of the Week

Submission Deadline: May 1, 2008 at 1600

Circle one: cadet faculty non-usma student non-usma faculty other

Problem Statement:

Find the smallest value of n such that

$$\frac{1}{\sqrt{1} + \sqrt{4}} + \frac{1}{\sqrt{4} + \sqrt{7}} + \frac{1}{\sqrt{7} + \sqrt{10}} + \cdots + \frac{1}{\sqrt{n-3} + \sqrt{n}} \geq 2008.$$

For full credit, demonstrate your solution by hand.

Submit your answer to Dr. Elisha Peterson at ae3263@usma.edu with the subject line **WP POTW...** or drop your solution off in my mailbox or on my desk (with date and time please!)