

Pi Mu Epsilon Problem of the Month March 2010

Consider a solid cube of length n on each side. Color the outside of the entire cube blue. Cut the cube into n^3 unit cubes. One-fifth of the faces of the unit cubes are blue. What is n ?

Problem of the Month Rules:

- ⌘ Submissions must include a complete mathematical justification along with the answer.
- ⌘ Submissions may only be made by individuals or groups of two and must be dated.
- ⌘ Due date: March 26, 2010 before 5 p.m.; they may be given to Dr. Leigh Lunsford, Dr. Phillip Poplin, or Dr. David Shoenthal (Mathematics).

Pi Mu Epsilon Problem of the Month website:

<http://www.longwood.edu/staff/shoenthaldw/potm.html>