

Problem of the Week-5

Posting Date 10/27/03. Submit solutions to Noah Aydin, RBH 309-A (e-mail or hard-copy) by 4 pm on 11/07.

There are 9 points in the interior of the unit cube (a cube whose sides are 1 unit long).

a) Show that at least two of the points are less than $\frac{\sqrt{3}}{2}$ apart.

b) Can $\frac{\sqrt{3}}{2}$ be replaced by a smaller number?