

Problem of the Week-4: Extreme Times

Let \vec{u} be the short hand of a clock and \vec{v} be the long hand of the same clock (regarded as vectors in 3D space).

1. Identify all times (to the nearest minute) between 12 am and 6 am at which $\vec{u} \bullet \vec{v}$ is minimum.
2. Identify all times (to the nearest minute) between 12 am and 3 am at which $||\vec{u} \times \vec{v}||$ is maximum.

Posting Date 10/06/08. Submit solutions to Noah Aydin, Mathematics Department, RBH 319 (e-mail or hard-copy, but hard copy submissions must include a time stamp) by 4 pm on 10/17/08. This problem was originally designed by Professor Judy Holdener.