Problem of the week #6
Due February 28th

Suppose two planes (in 3D space) intersect at an acute angle $\phi$ and are spanned by pairs of vectors $\mathbf{A}, \mathbf{B}$ and $\mathbf{C}, \mathbf{D}$ respectively.

**Problem.** Show $\cos \phi$ may be expressed in terms of the ten possible dot products between the four vectors $\mathbf{A}, \mathbf{B}, \mathbf{C}, \mathbf{D}$.

**Hint.** Consider cross product identities.

- Partial credit may be given for partial answers.
- Each POW will be due the following week at 1pm.
- Questions? Email: bthorner@unomaha.edu
- Submit solutions to (above email), DSC 210, or DSC 203.
- POWs, solutions, backgrounds, leaderboard available at