

WORKSHEET, FEB 1

0.1. **Component of vectors.** Find a unit vector that points in the same direction as

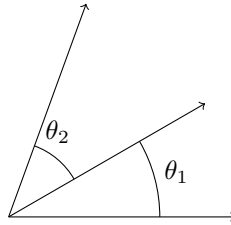
$$\langle 1, 3, 1 \rangle$$

Find the component of the vector  $\langle 2, 1, 1 \rangle$  onto this vector.

0.2. **Angles.** Prove the identity

$$\cos(\theta_1 + \theta_2) = \cos(\theta_1) \cos(\theta_2) - \sin(\theta_1) \sin(\theta_2)$$

by using the dot product formula for angles and the following setup of vectors.



0.3. **Angles II.** Find the angle between the diagonal of a cube and its edges.

