

**Name:**

1. Let  $\vec{u} = (3, 3, 3)$  and  $\vec{v} = (1, 0, 4)$ . Find the (Euclidean) distance between  $\vec{u}$  and  $\vec{v}$ , and find the cosine of the angle between  $\vec{u}$  and  $\vec{v}$ . State whether the angle is acute, obtuse, or  $90^\circ$ .