

# MATH 251: Practice 2

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Name: \_\_\_\_\_

Let  $u = \langle 1, 2, 1 \rangle$  and  $v = \langle 2, -1, 3 \rangle$ .

- (a) Compute  $u \cdot v$ .
- (b) Find the angle between  $u$  and  $v$ . You may leave this as an inverse cosine.
- (c) Find the decomposition  $u = u_{//} + u_{\perp}$  of  $u$  with respect to  $v$ .