

**Quiz 3**; Wednesday, February 10  
**MATH 53** with Professor Stankova  
**Section 109**; 11-12  
**GSI**: Eric Hallman

**Student name:**

You have 10 minutes to complete the quiz. Calculators are not permitted, and remember to show your calculations and explain your reasoning in order to receive full credit.

1. Determine whether the lines  $L_1$  and  $L_2$  are parallel, skew, or intersecting. If they intersect, find the point of intersection.

$$L_1 = \langle 3, 4, 1 \rangle + t\langle 2, -1, 3 \rangle$$

$$L_2 = \langle 1, 3, 4 \rangle + s\langle 4, -2, 5 \rangle$$