

Math 3280 Worksheet 13: Bases and Wronskians

Group members (1 to 3): _____

- (a) Are the vectors $v_1 = (1, -1, 0)$, $v_2 = (1, 0, -1)$, and $v_3 = (0, 1, -1)$ linearly independent or dependent?

- (b) What is the dimension of their span?

- (1) Find a basis for the subspace defined by the following equations for $(x_1, x_2, x_3, x_4, x_5) \in \mathbb{R}^5$:

$$2x_1 + x_3 - 2x_4 - 2x_5 = 0$$

$$x_1 + 2x_3 - x_4 + 2x_5 = 0$$

$$-3x_1 - 4x_3 + 3x_4 - 2x_5 = 0$$