

**MATH 260, CPA 8, Fall '14**

**Due: October 14, 2014**

**Honor Code:**

**Name:**

**Section:**

1) Determine whether the vectors in the set  $S$  spans the vector space  $V$ .

a)  $V = \mathbb{R}^2$ ;  $S = \{[0, 0], [1, 1]\}$

b)  $V = \mathbb{R}^3$ ;  $S = \{[1, 0, 0], [0, 0, 1], [5, 4, 3]\}$

2) Determine whether the set  $S$  is a linearly independent subset of the given vector space  $V$ .

a)  $V = \mathbb{R}^2$ ;  $S = \{[1, -1], [-1, 1]\}$

b)  $V = \mathbb{R}^3$ ;  $S = \{[1, 0, 0], [1, 1, 0], [1, 1, 1]\}$