

### 309 Worksheet 2.1

*True or False? Justify your answer:*

(1) Every reduced echelon form of a nonzero matrix has leading entry 1.

True — False?

REASON:

(2) Every reduced echelon form of a nonzero matrix has (1, 1)-entry 1.

True — False?

REASON:

(3) If a linear system with 3 equations and 3 unknowns has infinitely many solutions then the solution set is a line in  $\mathbb{R}^3$ .

True — False?

REASON:

(4) The echelon form of a matrix is unique.

True — False?

REASON:

(5) Whenever a system has a free variable, the solution set contains infinitely many solutions.

True — False?

REASON: