

Question 1 True/False: \mathbf{R}^n is a vector space.

Multiple Choice:

- (a) True ✓
 - (b) False
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Question 2 True/False: The x -axis is a subspace of \mathbf{R}^2 .

Multiple Choice:

- (a) True ✓
 - (b) False
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Question 3 True/False: The zero vector is a subspace of \mathbf{R}^n .

Multiple Choice:

- (a) True ✓
 - (b) False
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Question 4 True/False: Any plane in \mathbf{R}^3 is a subspace of \mathbf{R}^3 .

Multiple Choice:

- (a) True
 - (b) False ✓
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Question 5 True/False: Let $S = \{\vec{v}_1, \dots, \vec{v}_p\}$ be a set of vectors in a nonzero finite dimensional vector space V . The set of all linear combinations of the vectors in S is not a vector space.

Multiple Choice:

- (a) *True*
 - (b) *False* ✓
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Question 6 *True/False: Let $S = \{\vec{v}_1, \dots, \vec{v}_p\}$ be a set of vectors in a nonzero finite dimensional vector space V . If $\{\vec{v}_1, \dots, \vec{v}_{p-1}\}$ spans V , then S spans V .*

Multiple Choice:

- (a) *True* ✓
 - (b) *False*
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