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## Unit 4 - Week 2

### Course outline

How does an NPTEL online course work?

**Week 0 - Welcome to the course!**

**Week 1**

**Week 2**

- Lecture 7 : Reduced Row Echelon Form and Rank I (unit? unit=23&lesson=25)

- Lecture 8 : Reduced Row Echelon Form and Rank II (unit? unit=23&lesson=26)

- Lecture 9 : Reduced Row Echelon Form and Rank III

## Assignment 2 - Objective

The due date for submitting this assignment has passed. **Due on 2020-03-11, 23:59 IST.**  
As per our records you have not submitted this assignment.

1) State whether True or False.  
The empty set is a vector space.

1 point

- True  
 False

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
*False*

2) State whether True or False.  
The empty set is linearly independent.

1 point

- True  
 False

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
*True*

3) State whether True or False.  
A basis of the zero vector space is the empty set.

1 point

- True  
 False

(unit?  
unit=23&lesson=27)

Lecture 10 :  
Solvability of a  
Linear System,  
Linear Span,  
Basis I (unit?  
unit=23&lesson=28)

Lecture 11 :  
Solvability of a  
Linear System,  
Linear Span,  
Basis II (unit?  
unit=23&lesson=29)

Lecture 12 :  
Solvability of a  
Linear System,  
Linear Span,  
Basis III (unit?  
unit=23&lesson=30)

Quiz :  
**Assignment 2 -  
Objective  
(assessment?  
name=70)**

Assignment 2 -  
Subjective  
(/noc20\_ma08/subjective?  
name=71)

Weekly  
Feedback (unit?  
unit=23&lesson=75)

Download  
Videos (unit?  
unit=23&lesson=83)

Assignment 2 -  
Subjective:  
Solutions (unit?  
unit=23&lesson=99)

**Week 3**

**Week 4**

**Week 5**

**Week 6**

**Week 7**

**Week 8**

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
*True*

4) For any two subspaces  $U, W \subseteq \mathbb{R}^n$ , we define  
 $U + W = \{x + y : x \in U, y \in W\}$ .

**1 point**

State whether True or False.

For any subspace  $U \subseteq \mathbb{R}^n$ , there exists a unique subspace  $W \subseteq \mathbb{R}^n$  such that  $U + W = \mathbb{R}^n$ .

- True  
 False

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
*False*

5) State whether True or False.

**1 point**

For any subspace  $U \subseteq \mathbb{R}^n$ , there exists a unique subspace  $W \subseteq \mathbb{R}^n$  such that  
 $\dim U + \dim W = n$ .

- True  
 False

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
*False*

