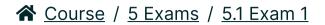


<u>Help</u>

sandipan\_dey >

<u>Course</u> <u>Progress</u> <u>Dates</u> <u>Discussion</u> <u>MO Index</u>







☐ Bookmark this page

Exams due Aug 30, 2023 05:00 IST Completed

## Problem: Complete the backward substitution

3.0/3.0 points (graded)

A linear system of three equations is given by,

$$Ku = f ag{5.11}$$

where  $m{K}$  is a  $m{3} imes m{3}$  matrix and  $m{u}$  and  $m{f}$  are column vectors of length 3.

Gaussian elimination (without any pivoting) is being applied to solve this system. At the end of the forward elimination process, the augmented matrix for this linear system is,

$$\begin{pmatrix} 2. & -1. & 3. & 6. \\ 0. & 5. & 7. & 6. \\ 0. & 0. & -4. & 8. \end{pmatrix}$$
 (5.12)

Solve for  $u=\left[u_0,u_1,u_2
ight]^T$  by performing the backward substitution on this augmented matrix.

✓ Answer: -2

What is the value of  $u_0$ ?

| 8                            | ✓ Answer: 8 |
|------------------------------|-------------|
| What is the value of $u_1$ ? |             |
| 4                            | ✓ Answer: 4 |
| What is the value of $u_2$ ? |             |
|                              | 1           |

Submit

Answers are displayed within the problem



© All Rights Reserved



## edX

**About** 

**Affiliates** 

edX for Business

Open edX

**Careers** 

<u>News</u>

## Legal

Terms of Service & Honor Code

Privacy Policy

**Accessibility Policy** 

<u>Trademark Policy</u>

<u>Sitemap</u>

Cookie Policy

**Your Privacy Choices** 

## **Connect**

<u>Idea Hub</u>

**Contact Us** 

Help Center

**Security** 

Media Kit















© 2023 edX LLC. All rights reserved.

深圳市恒宇博科技有限公司 <u>粤ICP备17044299号-2</u>