**Your Name: Cole Bardin** **Lab Section:** 62

*First Last*

**Lab 3: Visualization of Systems of Equations**

As a convenience, this **answer template** is provided if you wish to easily submit your work. Be sure to save it as a PDF before submitting online!

**Note: You must also submit a copy of your MATLAB Live script to receive full grades.**

|  |
| --- |
| **System of Equations #1:** |
|  |

**Question 1:** Paste your code using **fprintf** and **size** here.

fprintf("The size of the augmented matrix is: %d x %d\n", size(AM))

**Question 2:** Paste your reduced matrix named RAM here.

Solution:

**Question 3:** Paste your code to find the pivot column for row 2 here.

ANSWER:

pivot\_for\_row2 = find(RAM(2,:), 1);

**Question 4:** **Write the solutions**

**Question 4:** Complete this multiline comment to give the solutions.

Just add the missing information after each colon.

%{

    The basic variables are:  x1, x2

    The free variable is:   x3

    The solutions can be written: x1=x3-2 , x2=x3+2 where x3 is free.

%}

**Questions 5 and 6: Replace the sample graph with your graph so far. The sample was for a different system. Your solution line will NOT be vertical.**

Chart

Description automatically generated

**Questions 7-8:** Once both planes are added, paste in either an **X-Z view** or **a Y-Z** view using any colormap you like. Both planes should be clearly visible.**Grader will award one point for each plane.**

Chart

Description automatically generated

**Question 9:** Add your fully reduced matrices for **System #2** and for **System #3**

**Grader will pick one at random and award one point if it is correct.**

**Question 9a: Paste your reduced augmented matrix for system #2 here.**

Is it consistent? **NO**

**Question 9b: Paste your reduced augmented matrix for system #3 here.**

Do system #1 and system #3 have the exact same solutions?  **YES**

**Question 10:** Paste your code to spin your masterpiece here!!

N = 2; % Number of complete revolutions of the azimuth. Elevation fixed at 20.

elevation = 20

for k =0:1:360\*N

view([k, elevation])

    pause(0.05)

end

**Ready to Submit?**

Be sure all ten questions are answered. When your lab is complete, be sure to submit three files:

1. Your **completed Answer Template** as a PDF file
2. A copy of your **MATLAB Live Script**
3. A **PDF** copy of your **MATLAB Live Script** (Save-Export to PDF…)

The due date is the day after your lab section by **11:59pm** to receive full credit. You have one more day, to submit the lab (but with a small penalty), and then the window closes for good and your grade will be zero.