Part 1. Practice ‘Matrix Manipulation Skills’ examples: Matrices – Gavin Binder

Part 1 MATLAB code

Text

Description automatically generated with medium confidence

Prerequisite:

Chart

Description automatically generated

Part 1. #1 Answer

Diagram

Description automatically generated with low confidence

Part 1. #2 Answer

A picture containing graphical user interface

Description automatically generated

Part 1. #3 Answer

A picture containing chart

Description automatically generated

Part 1. #4 Answer

Chart

Description automatically generated with low confidence

Part 1. #5 Answer

A picture containing chart

Description automatically generated

Part 1. #6 Answer

Chart

Description automatically generated with low confidence

Part 1. #7 Answer

A picture containing chat or text message

Description automatically generated

Part 1. #8 Answer

A picture containing text, screenshot

Description automatically generated

Part 2. Practice ‘Matrix Manipulation 2 Skills’ examples: Matrices\_2 – Gavin Binder

Part 2ia Code and Answer

A picture containing graphical user interface

Description automatically generated

Chart, scatter chart

Description automatically generated

Part 2ib Code and Answer

Graphical user interface, text

Description automatically generated

Graphical user interface

Description automatically generated with medium confidence

Part 2ii1 Code and Answer

Graphical user interface, text, application

Description automatically generated

Text

Description automatically generated

Part 2ii2 Code and Answer

Graphical user interface, text, application

Description automatically generated

Chart

Description automatically generated with low confidence

Part 2ii3 Code and Answer

Graphical user interface, text, application

Description automatically generated

A picture containing text

Description automatically generated

Part 2ii4 Code and Answer

Graphical user interface, text, application

Description automatically generated

Text

Description automatically generated with medium confidence

Part 2iiia Typed and Answer

Determinant of A = (-1)(2)-(3)(4)=-2-12=-14

Part 2iiib Code and Answer

A picture containing chart

Description automatically generated

Chart

Description automatically generated with medium confidence

Part 3. Practice ‘Systems of Linear Equations’ examples: Systems of equations - Gavin Binder

Part 3ia Code and Answer

Text

Description automatically generated

Text, letter

Description automatically generated

Part 3ib Code and Answer

Text

Description automatically generated

Text

Description automatically generated

Part 3ii

Graphical user interface, application

Description automatically generated

Table

Description automatically generated with medium confidence

Part 4. Intro to STEM application’ Problem – electrical circuits – Gavin Binder

Part 4a.

Letter

Description automatically generated with low confidence

Text, letter

Description automatically generated

Part 4b

Code

Text, letter

Description automatically generated

Test 1

Text

Description automatically generated with medium confidence

Test 2

Text

Description automatically generated

Part 4c Code and Answer

Text

Description automatically generated

A picture containing text

Description automatically generated

Part 4d Code and Answer

Text, letter

Description automatically generated

Text

Description automatically generated

Part 5. Intro to STEM application’ Problem – mechanical systems

Part 5a.

Text, letter

Description automatically generated

Text, letter

Description automatically generated

Part 5b.

Test 1 Code and Answer

Text, letter

Description automatically generated

Chart

Description automatically generated

Test 2 Code and Answer

Text, letter

Description automatically generated

Graphical user interface, application

Description automatically generated

Part 5c. Code and Answer

Text

Description automatically generated

Chat or text message

Description automatically generated with low confidence

Part 5d Code and Answer

Text, letter

Description automatically generated

Chart

Description automatically generated

Part 6. Reflection on P3F group ‘collaboration’ activities – Gavin Binder

1. My group included Jeffrey Hsu and Phoenix Martin. Other than some help with MATLAB code, there where no other points of assistance.
2. MATLAB could be very useful in calculating derivates, including finding maxima and minima values. You could also do integration in MATLAB, likely making complicated problems much easier. –Gavin Binder

MATLAB could be a useful STEM tool because it can do all sorts of calculations which may be necessary for the field. Projects that would normally take time to write out and calculate by hand can be finished and replicated by MATLAB should one take the time to set up code for it.

-Phoenix Martin