***Solution Section* 4.3 – Multiplicative Inverses of Matrices**

***Exercise***

Show that *B* is Multiplicative inverse of *A*



***Solution***







*B* is not multiplicative inverse of *A*

***Exercise***

Show that *B* is Multiplicative inverse of *A*



***Solution***













∴ *B* is Multiplicative inverse of *A*

***Exercise***

Find the inverse, if exists, of 

***Solution***







***Exercise***

Find the inverse, if exists, of 

***Solution***





∴ Inverse ***doesn’t exist***

***Exercise***

Find the inverse of *A* = 

***Solution***

 

 

 

 





***Exercise***

Find the inverse of *A* = 

***Solution***







***Exercise***

Find the inverse of *A* = 

***Solution***







***Exercise***

Find the inverse of *A* = 

***Solution***







***Exercise***

Find the inverse of 

***Solution***







***Exercise***

Find the inverse of 

***Solution***





***Exercise***

Find the inverse of 

***Solution***





***Exercise***

Find the inverse of 

***Solution***





***Exercise***

Find the inverse of 

***Solution***





***Exercise***

Find the inverse of 

***Solution***



∴ Inverse ***doesn’t exist***

***Exercise***

Find the inverse of 

***Solution***



∴ Inverse ***doesn’t exist***

***Exercise***

Find the inverse of 

***Solution***





***Exercise***

Find the inverse of 

***Solution***



∴ Inverse ***doesn’t exist***

***Exercise***

Find the inverse of 

***Solution***



***Exercise***

Find the inverse of 

***Solution***





***Exercise***

Find the inverse of 

***Solution***





***Exercise***

Find the inverse of 

***Solution***





***Exercise***

Find the inverse of 

***Solution***





***Exercise***

Find the inverse of 

***Solution***



∴ Inverse ***doesn’t exist***

***Exercise***

Find the inverse of 

***Solution***



∴ Inverse ***doesn’t exist***

***Exercise***

Find 

***Solution***

 





 





***Exercise***

Find, where 

***Solution***

 



 

 

 





***Exercise***

Find, where 

***Solution***

 

 

 

 

  





***Exercise***

Find, where 

***Solution***

  

  

  

  

  



∴ The inverse matrix ***doesn’t exist***

***OR***

  

 

 

∴ The inverse matrix ***doesn’t exist***

***Exercise***

Find the inverse, if exists, of 

***Solution***

 



  



  





***Exercise***

Find the inverse, if exists, of 

***Solution***

 



  









***Exercise***

Find the inverse, if exists, of 

***Solution***















***Exercise***

Find the inverse, if exists, of 

***Solution***















***Exercise***

Find the inverse, if exists, of 

***Solution***















***Exercise***

Find the inverse, if exists, of 

***Solution***











∴ Inverse ***does not exist***

***Exercise***

Find the inverse, if exists, of 

***Solution***









∴ Inverse ***does not exist***

***Exercise***

Find the inverse, if exists, of 

***Solution***















***Exercise***

Find the inverse, if exists, of 

***Solution***









∴ Inverse ***does not exist***

***Exercise***

Find the inverse, if exists, of 

***Solution***



















***Exercise***

Find the inverse, if exists, of 

***Solution***













.









***Exercise***

State the conditions under which  exists. Then find a formula for  

***Solution***

For  exists, 











***Exercise***

State the conditions under which  exists. Then find a formula for  

***Solution***

For  exists, 

 







***Exercise***

State the conditions under which  exists. Then find a formula for  

***Solution***

For  exists, 

 









***Exercise***

State the conditions under which  exists. Then find a formula for  

***Solution***

For  exists, 

 













***Exercise***

Solve the system using   Given 

***Solution***

*X = A*-1*B*

 = 

= 

= 

***Solution***: 

***Exercise***

Solve the system using  

1. Write the linear system as a matrix equation in the form *AX= B*
2. Solve the system using the inverse that is given for the coefficient matrix



***Solution***

1. 
2. 

***Exercise***

Solve the system using  

1. Write the linear system as a matrix equation in the form 
2. Solve the system using the inverse that is given for the coefficient matrix



***Solution***

1. 
2. 

***Exercise***

Use the ***inverse*** of the coefficient matrix to solve the linear system 

***Solution***







 



∴ ***Solution***: 

***Exercise***

Use the ***inverse*** of the coefficient matrix to solve the linear system 

***Solution***







 



∴ ***Solution***: 

***Exercise***

Use the ***inverse*** of the coefficient matrix to solve the linear system 

***Solution***







 



∴ ***Solution***: 

***Exercise***

Use the ***inverse*** of the coefficient matrix to solve the linear system 

***Solution***







 



∴ ***Solution***: 

***Exercise***

Use the ***inverse*** of the coefficient matrix to solve the linear system 

***Solution***







 



∴ ***Solution***: 

***Exercise***

Use the ***inverse*** of the coefficient matrix to solve the linear system 

***Solution***





*Inverse* matrix ***doesn’t exist***.





∴ ***No*** ***Solution***

***Exercise***

Use the ***inverse*** of the coefficient matrix to solve the linear system 

***Solution***





*Inverse* matrix ***doesn’t exist***.



∴ ***Solution***: 

***Exercise***

Use the ***inverse*** of the coefficient matrix to solve the linear system 

***Solution***







 



∴ ***Solution***: 

***Exercise***

Use the ***inverse*** of the coefficient matrix to solve the linear system 

***Solution***







 



∴ ***Solution***: 

***Exercise***

Use the ***inverse*** of the coefficient matrix to solve the linear system 

***Solution***







 



∴ ***Solution***: 

***Exercise***

Use the ***inverse*** of the coefficient matrix to solve the linear system 

***Solution***







 



∴ ***Solution***: 

***Exercise***

Use the ***inverse*** of the coefficient matrix to solve the linear system 

***Solution***







 



∴ ***Solution***: 

***Exercise***

Use the ***inverse*** of the coefficient matrix to solve the linear system 

***Solution***









 



∴ ***Solution***: 

***Exercise***

Use the ***inverse*** of the coefficient matrix to solve the linear system 

***Solution***









 



∴ ***Solution***: 

***Exercise***

Use the ***inverse*** of the coefficient matrix to solve the linear system 

***Solution***









 



∴ ***Solution***: 

***Exercise***

Use the ***inverse*** of the coefficient matrix to solve the linear system 

***Solution***





 



∴ ***Solution***: 

***Exercise***

Use the ***inverse*** of the coefficient matrix to solve the linear system 

***Solution***







 



∴ ***Solution***: 

***Exercise***

Use the ***inverse*** of the coefficient matrix to solve the linear system 

***Solution***







 



∴ ***Solution***: 

***Exercise***

Use the ***inverse*** of the coefficient matrix to solve the linear system 

***Solution***

















 



***∴ Solution***: 

***Exercise***

Use the ***inverse*** of the coefficient matrix to solve the linear system 

***Solution***

















 



**∴ *Solution***: 

***Exercise***

Use the ***inverse*** of the coefficient matrix to solve the linear system 

***Solution***

















 



**∴ *Solution***: 

***Exercise***

Use the ***inverse*** of the coefficient matrix to solve the linear system 

***Solution***

















 



**∴ *Solution***: 

***Exercise***

Use the ***inverse*** of the coefficient matrix to solve the linear system 

***Solution***













 





**∴ *Solution***: 

***Exercise***

Use the ***inverse*** of the coefficient matrix to solve the linear system 

***Solution***

















 



**∴ *Solution***: 

***Exercise***

Use the ***inverse*** of the coefficient matrix to solve the linear system 

***Solution***



















 



**∴ *Solution***: 

***Exercise***

Use the ***inverse*** of the coefficient matrix to solve the linear system 

***Solution***















 



**∴ *Solution***: 

***Exercise***

Use the ***inverse*** of the coefficient matrix to solve the linear system 

***Solution***















 



**∴ *Solution***: 