|  |
| --- |
| 8.3 )  The solution is:  x1 = -17.0192  x2 = -9.6154  x3 = -1.5385  The transpose of the coefficient matrix is:  0 0 4  -6 2 -3  5 7 7    The inverse of the coefficient matrix is:  -0.1683 -0.1298 0.2500  -0.1346 0.0962 0  0.0385 0.1154 0 |
| 9.11 )  The number of components that can be produced per day are:  The number of component 1 = 20  The number of component 2 = 40  The number of component 3 = 60 |
| 12.2)  a)  The solution using Gauss-Seidel method:  x1 = 167.8711  x2 = 239.1211  x3 = 250.8105    The percentage error using Gauss-Seidel method with Relaxation:  pf1 = 3.5020  pf2 = 2.4585  pf3 = 1.1720      b)  The solution using Gauss-Seidel method with Relaxation:  x1 = 172.0706  x2 = 243.4673  x3 = 252.9752    The percentage error using Gauss-Seidel method with Relaxation:  pf1 = 0.9346  pf2 = 0.9702  pf3 = 0.4469 |
| 12.9)  a)  1 |
| 12.9)  b)  The solution using Successive substitution:  x1 = 1.6011  x2 = 1.5609    c)  The solution using Newton-Raphson:  x1 = 1.6005  x2 = 1.5616 |