

**Answer Key – Multiple-Choice Test - Gauss-Siedel Method
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$$1 - B - |a_{ii}| \geq \sum_{\substack{j=1 \\ i \neq j}}^n |a_{ij}|, i = 1, 2, \dots, n; \quad \text{and} \quad |a_{ii}| > \sum_{\substack{j=1 \\ i \neq j}}^n |a_{ij}| \text{ for any } i = 1, 2, \dots, n$$

$$2 - C - [0.90666 \quad -1.0115 \quad -1.0242]$$

$$3 - B - \begin{bmatrix} 7 & 5 & 2 \\ 1 & 2 & 1 \\ 2 & 7 & -11 \end{bmatrix} \begin{bmatrix} x_1 \\ x_2 \\ x_3 \end{bmatrix} = \begin{bmatrix} 17 \\ -5 \\ 6 \end{bmatrix}$$

$$4 - C - 3$$

5 – B – Sub Seidel(n, a, x, rhs, nmax)

For k = 1 To nmax

For l = 1 To n

Sum = 0

For j = 1 To n

If (i <> j) Then

Sum = Sum + a(i,j) * x(j)

Endif

Next j

x(i) = (rhs(i) – Sum) / a(i,i)

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Next i

Next k

End Sub

6 – B – 30.675

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