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ENG 382 Assignment II.

Answer:

- Commandwindow
- Clear
- clc
- Format short g
- $x(1) = 0.5$;
- $n = 1$;
- $tol = 1E-21$;
- $maxi = 50$;
- $err(1) = 0$;
- Syms x
- $g = (exp(-05*x)*(4-x))-2$;
- $gprime = diff(g)$;
- for $k = 2:mal$;
  - $x(k) = (x(k-1)) - ((subs(g, x(k-1)))/subs(gprime, x(k-1)$
  - $k = [k, k]$;
  - $err(k) = abs(x(k) - x(k-1))*100$;
  - If $err(k) <= tol$; break; end;
- end
- $table = [k' x' err']$

Commandwindow Answer

1	0 5	0
2	0 83889	33 889
3	0 88496	4·6065
4	0 88571	0 07526
5	0.88571	$1.9704e^{-05}$
6	0 88571	$1.3545e^{-12}$
7	0 88571	0