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Chemical Engineering
17/Engg/006

Engineering Maths Assignment
Clc

Close all

format short g

```
x(1)=0.5; k=1; tol=1e-2; max1=50; err(1)=0;
```

```
Syms x
```

```
g = (exp(-0.5*x))*(4-x)-2;
```

```
g_prime = diff(g)
```

```
for k=2:max1;
```

```
    x(k) = (x(k-1)) - ((subs(g, x(k-1)))/subs
```

```
    g_prime, x(k-1)));
```

```
    k = [k; k]
```

```
    err(k) = abs(x(k) - x(k-1))
```

```
    if err(k) <= tol, break, end
```

```
end
```

```
table = [k' x' err']
```

```
0.5, 0
```

```
0.88989 0.33509
```

```
0.88496 0.40065
```

```
0.88571 0.0007526
```

```
0.88571 1.9404e-07
```

```
0.88571 1.3545e-14
```

```
0.88571
```