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In [128]: runfile('/home/deepak/Desktop/ML/Q3.py',
wdir='/home/deepak/Desktop/ML')
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Component (degree R)	Mole fraction	MWi	Pci (psia)	Tci
0 C1 344	0.820	16.04	673	
1 C2 550	0.080	30.07	709	
2 C3 666	0.028	44.10	618	
3 C4 766	0.009	58.12	551	
4 C5 847	0.020	72.15	485	
5 N2 492	0.030	28.02	227	
6 CO2 548	0.013	44.01	1073	

0	13.15280
1	2.40560
2	1.23480
3	0.52308
4	1.44300
5	0.84060
6	0.57213

```
dtype: float64
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3.1. Apparent molecular weight, MWa = 20.17

3.2. Specific gravity, Yg = 0.70

3.3. Pseudo-critical pressure, Ppc = 661.30 psia

3.3. Pseudo-critical temperature, Tpc = 390.45  
degree R

3.5. Viscosity of the gas at reservoir condition  
using Carr-Kobayashi- Burrows (CKB) correlation =  
0.020 cp

3.7. Gas deviation factor (z-factor) at reservoir  
condition using Hall-Yarborough (HY) correlation =  
1.17

3.8. Gas density at reservoir condition =  
59.20017916062827 lb/ft<sup>3</sup>  
3.9 Pseudo-pressure  $m(p)$  at reservoir condition =  
1.737E+09 psi<sup>2</sup>/cp (approx.)

In [129]: