

Intro To Thermo Fluids Tutorial 2

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1 Question 1

T °C	P kPa	v m ³ kg ⁻¹	Phase description
200	150	1.626445	Superheated vapour
300	8587.9	0.021659	Saturated vapour
400	40000	0.001911	Supercritical
200	1554.9	0.1019994	Saturated liquid-vapour mixture ($x = 0.8$)

2 Question 2

T °C	P kPa	h or u kJ kg ⁻¹	x (if applicable)	Phase description
200	800	$u = 2631.1$	-	Superheated vapour
140	361.53	$h = 1800$	0.5646784498	Saturated liquid-vapour mixture
80	500	$u = 334.97, \quad h = 335.02$	-	Compressed liquid
160	5000	$u = 672.55, \quad h = 678.04$	-	Compressed liquid

3 Question 3

T °C	P kPa	h kJ kg ⁻¹	v m ³ kg ⁻¹	Phase description
-8	500	41.19	0.0007571	Compressed liquid
-12	185.37	160.348	0.06471596	Saturated liquid-vapour mixture ($x = 0.6$)
30	770.64	235.6290123	0.022	Saturated liquid-vapour mixture ($x = 0.8207130361$)
100	600	339.47	0.0479	Superheated vapour