

NDID	Problem 1					Problem 2					Problem 3					Final Grade
	a) 8	b) 8	c) 8	d) 8	e) 8	a) 14	b) 10	c) 6	a) 15	b) 15	c) 6	a) 15	b) 15			
902085075	8	8	8	8	8	14	10	6	15	15	6	15	15	100		
902048494	8	8	8	8	8	14	10	6	15	15	6	15	10 see solution	95		
902079535	8	8	8	8	8	14	10	6	15	15	6	15	10 see solution	95		
902088884	8	8	8	8	8	14	10	6	15	15	6	15	8 see solution	93		
902037801	8	7 right work wrong answer	8	8	6 right equation, pump work negative	14	10	6	15	15	6	15	10 see solution	92		
902101705	8	8	8	8	8	13 wrong numbers	9 wrong numbers	2 see soln	15	12 see solution	15	6	12 see solution	91		
902083647	8	8	8	8	8	13 calculation error	10	6	15	6 see solution	15	6	6 see solution	90		
902084746	8	8	8	8	6 Pump work negative	7 Point 4 not right	14	10	4	15	8 see solution	15	8 see solution	88		
902103815	8	8	8	8	7 3 to 4 not correct	12 work not quite right	14	10	2	15	9 see solution	15	9 see solution	88		
902030721	6 wrong h3	8	8	8	5 missing numerical volume values, v2=v1	14	10	2	15	10 see solution	15	10 see solution	88			
902086259	8	8	8	8	5 you need a cycle, and should have P4>P1	12 wrong numbers	9 wrong numbers	2 see soln	15	10 see soln	15	10 see soln	85			
902104511	8	8	8	8	8	8 wrong work	10	2	15	10 see solution	15	10 see solution	85			
902085155	8	8	8	8	8	6 high pressure should be below P_c	12 wrong numbers	9 wrong numbers	2 see soln	15	8 see soln	15	8 see soln	84		
902118299	8	8	8	8	4 see solution	14	10	5	10	9 see solution	15	9 see solution	84			
902089456	8	8	8	8	7 state 3 should be past critical volume	10 multiply change in energy by mass, wrong work	8 multiply by mass	2	15	10 see solution	15	10 see solution	84			
902078018	4 no m^3 dot	4	8	8	8	14	7 du not dh	4 vibration and rotation needed	15	11 see solution	15	11 see solution	83			
902104152	8	8	8	8	8	13 calc error in mass	8 wrong u1	2	10	10 see solution	15	10 see solution	83			
902038604	8	8	8	8	8	6 missing work	10	2	15	10 see solution	15	10 see solution	83			
902089724	6 wrong h2	8	7 wrong h2	8	5 state 2 and 3 should be off the dome, wrong v2	14	7 use energy not enthalpy	2	15	10 see solution	15	10 see solution	82			
902093809	2 see solution	8	8	8	8	10 wrong work	10	2	15	10 see solution	15	10 see solution	81			
902084173	8	8	8	8	8	10 a few errors, see solution	7 need du not dh	2 see solution	15	5 see solution	15	5 see solution	79			
902011187	8	8	8	8	8	6 work required	7 mass not used	4 see solution	15	6 see solution	15	6 see solution	78			
902101399	8	8	8	8	6 you sketched a process, return 4>1	6 need the W12	10	2	15	7 need to derive the time constant	15	7 need to derive the time constant	78			
902087815	8	8	8	8	5 equation incorrect	7 need work	4	2	15	8 see solution	15	8 see solution	78			
902047444	8	8	8	8	8	6 Need work, not delta H	7 incorrect u's	2 see solution	15	7 see solution	15	7 see solution	77			
902102015	8	8	8	8	8	10 find work with PdV	6 see solution	2 but why does cp change?	10	9 see solution	15	9 see solution	77			
902085080	8	8	8	8	6 high pressure should be below P_c	4 need W12; not a CV	5 not a CV, wrong approach	2 see soln	15	10 see soln	15	10 see soln	74			
902089355	8	8	8	8	7 state 4 should be on the dome	8 need mass for change in energy, wrong work	8 multiply by mass	2	7	10 see solution	15	10 see solution	74			
902083668	8	8	8	8	3 Plot not right, see solution	14	9 calculation error	6	3 see solution	6 see solution	15	6 see solution	73			
902091063	8	8	8	6 see soln	8 right idea, wrong numbers	10 use cv not cp, wrong work	8 use energy not enthalpy	2	4	10 see solution	15	10 see solution	72			
902095697	8	8	8	8	8	6 need the W12	7 du not dh	2 see soln	15	3 see soln	15	3 see soln	71			
902106614	3 wrong h values. No need to convert to C	8	8	5 badly distorted plot, P_3 < P_c	6 need the W12	6 need the W12	7 du not dh	3 its more vibration/rotation than inter-molecule	15	8 see soln	15	8 see soln	71			
902087548	8	8	4 multiply by mdot, not divide	1 see solution	11 trapezoidal for work	9 work is off	4	2	15	2 see solution	15	2 see solution	70			
902089001	8	8	8	8	6 P shouldn't be above critical point	6 need work, incorrect cv	7 du not dh	2 see solution	10	6 see solution	15	6 see solution	69			
902152289	8	6 wrong h values	8	8	6 not clear how you got your numbers	7 v_4 > v_2	10 Work calculation has errors, see soln	10	3 see soln	0	10	3 see soln	68			
902089666	8	8	8	8	6 isobaric 4 to 1, it is a cycle	6 need work	8 Q equation not quite right	2 see solution	10	4 see solution	15	4 see solution	68			
902046468	8	8	8	8	8	6 need the W12	10	2	15	5 see soln	15	5 see soln	66			
902088647	6 units are wrong	6 h3 - h4, h4 is incorrect	6 h1 - h2, h1 incorrect	7	6 3 should not be under vapor dome	6 need to consider work	7 du not dh	6	10	6 see solution	15	6 see solution	66			
902088766	8	8	8	8	8	10 wrong work	10	2	15	3 correct c values	15	3 correct c values	66			
902098025	8	8	8	0	7 Distorted plot	14	8	4 see solution	3	3	15	3	63			
902099315	8	8	8	6 pump work negative	6	9 see solution	10	2 see solution	3 see solution	3 see solution	15	3 see solution	63			
902086239	8	8	8	4 see soln	5 need a vapor dome	2 see soln	2 see soln	2 see soln	15	9 see soln	15	9 see soln	63			
902088025	8	8	8	8	4 see solution	7 need work	1 imperfect, cv not constant	0 see solution	10	8 see solution	15	8 see solution	62			
902084016	8	8	8	8	8	6 see solution	3 see solution	2	5 see solution	3 see solution	15	3 see solution	59			
902086591	4 see solution	4 see solution	4 see solution	4 see solution	6 3 to 4 incorrect	10 find work with PdV	7 don't forget work!	2 but why are cv and cp less accurate?	10	7 see solution	15	7 see solution	58			
902085368	8	6 wrong h values	6 wrong h values	8	8	4 need W12; not a CV	5 not a CV, wrong approach	2 see soln	5 can't use ideal gas!	4 see soln	15	4 see soln	56			
902152656	8	6 multiply by mdot	6 multiply by mdot	0 see solution	4 many mistakes	7 use energy not enthalpy	2	8	10 see solution	56	10 see solution	56				
902103643	7 wrong h2	7 h3 - h4	7 h1 - h2	5 equation incorrect	0 missing	7 need work	5 work is not zero, need m	2 see solution	6 see solution	6 see solution	15	6 see solution	52			
902079473	8	8	8	8	6 1-2 wrong plot	3	3	2	15	3 see solution	15	3 see solution	50			
902082955	8	8	8	6 Pump work should be deducted	8	3 see solution	3 see solution	2 see solution and watch lectures	1 see solution	1 see solution	15	1 see solution	48			
902090532	2 see solution	8	8	4 Qdot in was given, pump work is negative	4 missing numerical volume values, 1 should be on dome	4 missing work, use cv not cp, multiply by mass	8 wrong mass	2	2	8 see solution	15	8 see solution	48			
902095902	8	5 wrong h values; unclear analysis	5 wrong h values; unclear analysis	0 wrong concepts, see soln	3 many mistakes	3 see soln	3 see soln	2 see soln	15	3 see soln	15	3 see soln	47			
902089142	2 see solution	5 no Q, adiabatic	4 no Q	8	6 h>v3	6 missing work	7 use energy not enthalpy	0	7	0	15	0	45			
902105631	2 wrong equation, right h values	6 multiply by mdot	8	0	7 missing numerical values for volume	12 multiply change in energy by mass	7 wrong mass, subtract u1	0	2	0	15	0	44			
902048915	8	4 see soln	3 wrong first law, see soln	0 see soln	0 see soln	8 see soln	8 see soln	2 see soln	15	5 very confused, see soln	15	3 see soln	41			
902094809	2 see solution	0	0	4 see solution	4 4-1 not right, label x	4 see solution	10	4	10	6 see solution	15	6 see solution	40			
902083334	1 see soln	1 see soln	1 see soln	1 see soln	1 see soln	6 need the W12	10	2 see soln	5 see soln	5 see soln	15	5 see soln	33			
902079468	0	4	4	6	0	2 see solution	2 see solution	2 see solution	3 see solution	3 see solution	15	3 see solution	26			
902087242	2 see solution	4 need mdot	3 see solution	3 see solution	1 see solution	4 see solution	3 see solution	1 see solution, work is in both cases	0 see solution	2 see solution	15	2 see solution	23			
901974848	8	4 where is the calculation?	0	1 Wrong plot, see solution	2	2	2	2	1	1	15	1	21			
902084641	0	0	0	0	0	3	2	2	3 see solution	3 see solution	15	3 see solution	15			
902101438	0	0	0	0	0	0	0	0	0	0	15	0	0			
6.59677	6.854838	6.741936	6.145161	5.709677	32.0483871	8.35483871	7.30645	2.67741	0.9790322	6.5483871	0	66.72580645				
Problem 1 Average			Problem 1 Average				Problem 2 Average			Problem 3 Average						