

Prob 9.20		4 NH₃ + 5 O₂ ==> 4 NO + 6 H₂O							
		2 NH₃ + 3/2 O₂ ==> N₂ + 3 H₂O							
(a)	Cp coefficients								
		a	b	c	d	T	Form	DelH_f	
	NH ₃ (g)	3.52E-02	2.95E-05	4.42E-09	-6.69E-12	C	1	-46.19	
	O ₂	2.91E-02	1.16E-05	-6.08E-09	1.31E-12	C	1	0	
	N ₂	2.90E-02	2.20E-06	5.72E-09	-2.87E-12	C	1	0	
	NO	2.95E-02	8.19E-06	-2.93E-09	3.65E-13	C	1	90.37	
	H ₂ O(g)	3.35E-02	6.88E-06	7.60E-09	-3.59E-12	C	1	-241.83	
		In				Out			
		T (C)	n (mol/min)	H_Hat (kJ/mol)	H (kJ/min)	T (C)	n (mol/min)	H_hat (kJ/mol)	H (kJ/min)
	NH ₃ (g)	25	100	-4.62E+01	-4.62E+03	700	0	-1.51E+01	0.00E+00
	O ₂	150	189	3.76E+00	7.10E+02	700	69	2.19E+01	1.51E+03
	N ₂	150	711	3.66	2.60E+03	700	716	20.60	1.47E+04
	NO		0		0.00E+00	700	90	1.12E+02	1.01E+04
	H ₂ O(g)		0			700	150	-2.17E+02	-3.25E+04
	Sum				-1.31E+03				-6.20E+03
	Q= sum(ni*Hi)_out - sum(ni*Hi)_in								
	Q=	-4894.0 kJ/min							
		-81.6 kW							