

① EPA mandate  $\rightarrow$  2.7 wt% O (Ref?)  $\downarrow$

$\Sigma$ : \_\_\_\_\_

20%

	Additive	Formula	$\left(\frac{A}{F}\right)_{st}$	mol%	wt%	vol%
+4	MeOH	...	...	...	...	...
+3	EtOH	...	...	...	...	...
+3	ETBE	...	...	...	...	...
+3	DME	...	...	...	...	...
+3	TAME	...	...	...	...	...

Commentary?  
 $\downarrow$  +4  
 Recommendation?

20%

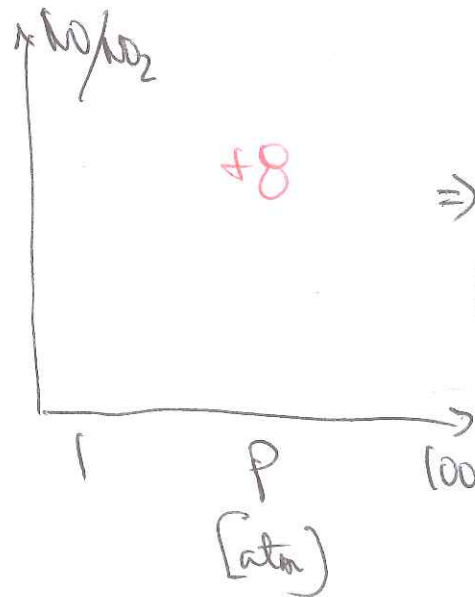
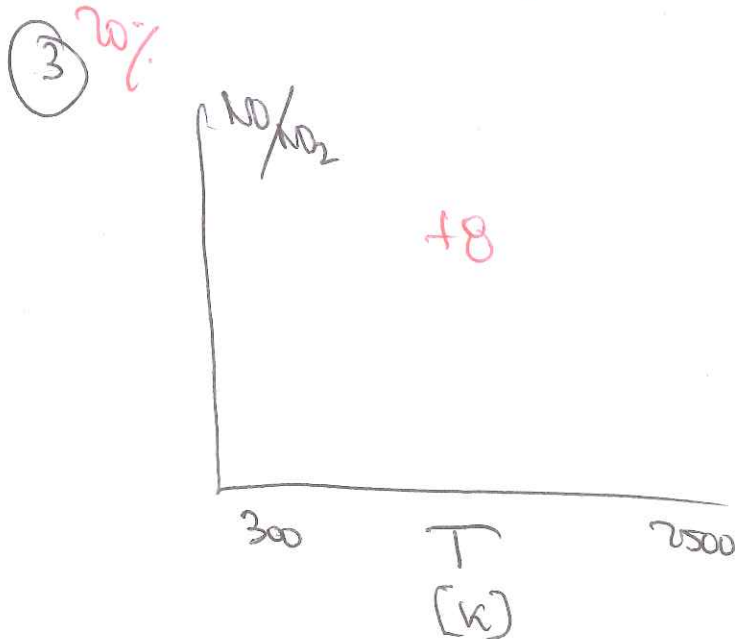
(a)  $\frac{t_{CO_2}}{Y}$ ;  $\frac{t_{SO_2}}{X}$ ;  $\frac{m^3(STP)}{s}$

+8

(b)  $\% N_2$ ;  $\% CO_2$ ;  $\% H_2O$ ;  $\% O_2$   $\rightarrow$  ppm  $SO_2$

+8

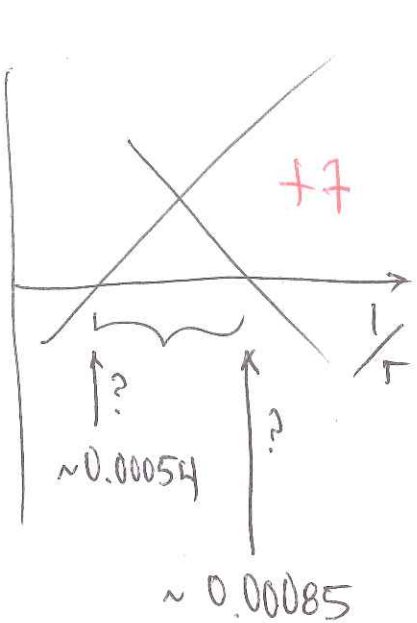
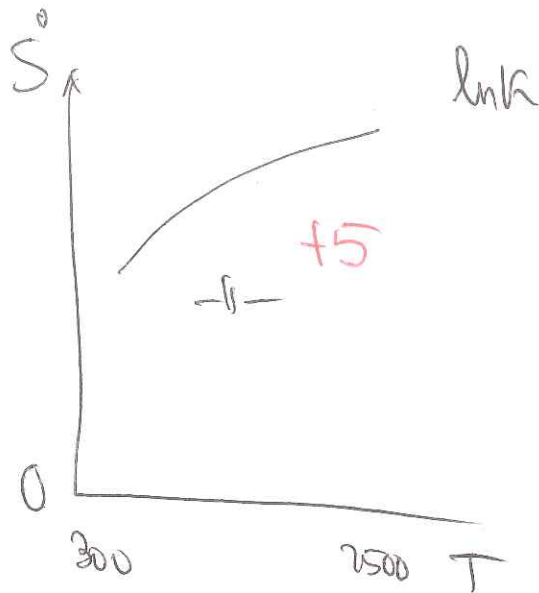
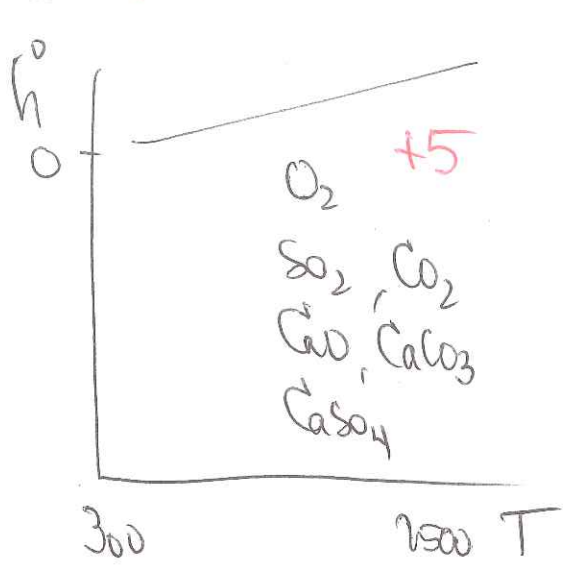
$\Rightarrow$  Comment? +4



+4  
 $\Rightarrow$  Comments?  
 (helabelier?)

$\downarrow$   $NO_x \approx NO$   
 ? g/mile

4) 20%



⇒ Comments: FBC vs. pulverized coal combustion?  
 (+3)  
 (minutes) (~1s)

5) 20%

(a) Jetta NOx removal:

$$Eff = \frac{Input - Output}{Input} = \frac{?}{?} \quad (+3) \quad (Reasonable?)$$

0.07 g NO/mile (?)

Zeldovich mechanism (+7)

(b) power plant NOx removal:

$$Eff = \frac{Input - Output}{Input} = \frac{?}{?} \quad (+3) \quad (Reasonable?)$$

NSRS

Zeldovich mechanism and/or AP-42 (+7)

Compare!