

**QUANTITIES IN CHEMICAL REACTIONS PRACTICE
ANSWERS**

$6 \text{CO}_2(g) + 6 \text{H}_2\text{O}(l) \rightarrow 6 \text{O}_2(g) + \text{C}_6\text{H}_{12}\text{O}_6(aq)$				
	CO₂	H₂O	O₂	C₆H₁₂O₆
1	12	12	12	2
2	6	6	6	1
3	18	18	18	3
4	24	24	24	4
5	30	30	30	5

$\text{C}_3\text{H}_8(l) + 5 \text{O}_2(g) \rightarrow 4 \text{H}_2\text{O}(l) + 3 \text{CO}_2(g)$				
	C₃H₈	O₂	H₂O	CO₂
6	3	15	12	9
7	5	25	20	15
8	2	10	8	6
9	4	20	16	12
10	10	50	40	30

$2 \text{N}_2\text{O}_5(g) \rightarrow 4 \text{NO}_2(g) + \text{O}_2(g)$			
	N₂O₅	NO₂	O₂
11	2.5	5	1.25
12	0.75	1.5	0.375
13	19.2	38.4	9.6
14	2.65	5.3	1.325
15	7.2	14.4	3.6

$2 \text{C}_8\text{H}_{18}(l) + 25 \text{O}_2(g) \rightarrow 16 \text{CO}_2(g) + 18 \text{H}_2\text{O}(g)$				
	C₈H₁₈	O₂	CO₂	H₂O
16	1.0	12.5	8	9
17	0.144	1.8	1.152	1.296
18	1.2	15	9.6	10.8
19	0.478	5.975	3.82	4.3
20	0.875	10.9	7	7.875

21. 4.8 g	25. 5.1 g	29. 2.1 g	33. 17 g
22. 33 g	26. 2.5 g	30. 1.2 g	34. 10 g
23. SO ₂	27. CaCl ₂	31. FeS	35. O ₂
24. 47 moles	28. 30 g	32. 1.0 g	36. 37.5 g

Balanced equation for 33-36: **$4 \text{NH}_3 + 5 \text{O}_2 \rightarrow 4 \text{NO} + 6 \text{H}_2\text{O}$**