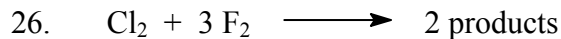
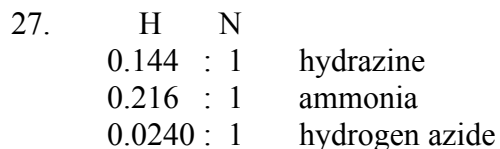
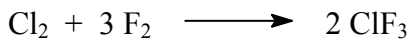


Chapter 2: 26, 27, 49, 57, 59, 61, 64, 65, 68, 74, 76, 77, 80



Must balance: 2 Cl and 6 F in 2 molecules of product. Dividing by 2, gives 1 Cl and 3 F in 1 molecule of product: ClF_3 (most metallic element given first).



$$\frac{0.216}{0.144} = 1.5 \times 2 = 3 \quad \text{Small, whole number combining ratio}$$

$$\frac{0.216}{0.0240} = 9 \quad \text{Small, whole number combining ratio}$$

$$\frac{0.144}{0.0240} = 6 \quad \text{Small, whole number combining ratio}$$

Hydrazine is actually N_2H_4
Ammonia is actually NH_3
Hydrogen azide is actually HN_3

The ratio of H in N_2H_6 (2 x NH_3) to H in N_2H_4 (same number of N's) is 6/4 or 1.5.

The ratio of H in N_6H_{18} (6 x NH_3) to H in H_2N_6 (same number of N's) is 18/2 or 9.

The ratio of H in N_6H_{12} (3 x N_2H_4) to H in H_2N_6 (same number of N's) is 12/2 or 6.

68. a. $(\text{NH}_4)_2\text{HPO}_4$ g. HBr
 b. Hg_2S h. HBrO_2
 c. SiO_2 i. HBrO_4
 d. Na_2SO_3 j. KHS
 e. $\text{Al}(\text{HSO}_4)_3$ k. CaI_2
 f. NCl_3 l. CsClO_4

74. a. Fe^{2+} p⁺ 26 e⁻ 24 FeO
 b. Fe^{3+} p⁺ 26 e⁻ 23 Fe_2O_3
 c. Ba^{2+} p⁺ 56 e⁻ 54 BaO
 d. Cs^+ p⁺ 55 e⁻ 54 Cs_2O
 e. S^{2-} p⁺ 16 e⁻ 18 Al_2S_3
 f. P^{3-} p⁺ 15 e⁻ 18 AlP
 g. Br^- p⁺ 35 e⁻ 36 AlBr_3
 h. N^{3-} p⁺ 7 e⁻ 10 AlN

76. a. Te
 b. Rb
 c. Ar
 d. At

77. X^{2+} , ion has 86 e⁻, atom has 88 e⁻ and 88 p⁺. The atom is Ra. $230 - 88 = \underline{142 \text{ n}^\circ}$.

80. sodium arsenate
 arsenic acid
 magnesium antimonate