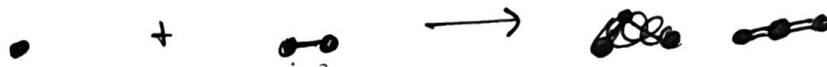
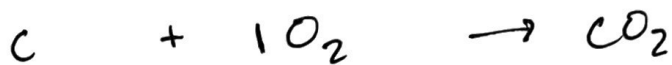
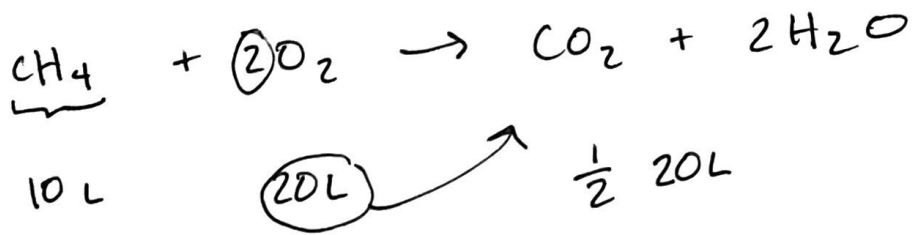
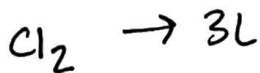
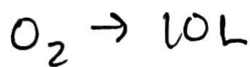


Problem 14



Problem 19

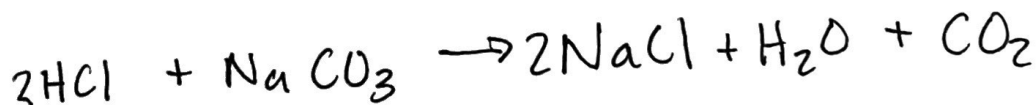


$$PV = nRT$$

$$\frac{V}{n} = \frac{RT}{P} = \frac{V}{n}$$

P

Problem 24



179.2 L

Problem 25

85.6281% C

14.3719% H

by mass

3.22 g

$$V = 1.2 \text{ L}$$

$$T = -190.842 \text{ }^\circ\text{C}$$

$$T = 82.308 \text{ K}$$

$$P = 491 \text{ torr}$$

$$R = 62.3636 \frac{\text{L} \cdot \text{torr}}{\text{K mol}}$$

$$PV = nRT$$

$$(491 \text{ torr})(1.2 \text{ L}) = n \left(62.3636 \frac{\text{L} \cdot \text{torr}}{\text{K mol}} \right) (82.308 \text{ K})$$

$$n = 0.1147 \text{ mol}$$

$$\frac{\text{g}}{\text{mol}} = \text{MM}$$

$$\frac{3.22 \text{ g}}{0.1147 \text{ mol}} = 28.07 \text{ g/mol}$$

$$C = 12 \times 2 = 24$$

$$H = 4$$

$$\frac{4}{28}$$

$$\frac{24}{28} = \frac{4}{28} =$$

$$0.85$$

$$28 \cdot 0.85 = 24/12 = 2$$