Chemistry Test 2 Equations

Dylan Bobb

April 5, 2018

1 Gases

$$PV = nRT \tag{1}$$

$$\frac{p_1 v_1}{n_1 t_1} = \frac{p_2 v_2}{n_2 t_2} = R \tag{2}$$

$$P_T = P_1 + P_2 \tag{3}$$

Let a represent the attractive forces
Let b represent the finite size of the gas particles

$$P = \frac{nRT}{V - nb} - a(\frac{n}{v})^2 \tag{4}$$

$$\frac{Ra}{Rb} = \sqrt{\frac{mb}{ma}} \tag{5}$$

$$\frac{Ta}{Tb} = \sqrt{\frac{ma}{mb}} \tag{6}$$

$$KE = \frac{3}{2}RT \tag{7}$$

$$V_{rms} = \sqrt{\frac{3RT}{M}} \tag{8}$$

2 Atomic Structure

$$c = \lambda\nu \tag{9}$$

$$E = h\nu \tag{10}$$

$$E_n = \frac{-B}{n^2} \tag{11}$$

$$\lambda = \frac{h}{mv} \tag{12}$$