

#7 Convert the following to atmospheres.

A. 109.2 kPa

$$\frac{109.2 \text{ kPa}}{101.325 \text{ kPa}} \left| \frac{1 \text{ atm}}{1} \right| = 1.08 \text{ atm}$$

B. 781 torr

$$\frac{781 \text{ torr}}{760 \text{ torr}} \left| \frac{1 \text{ atm}}{1} \right| = 1.03 \text{ atm}$$

C. 781 mm Hg

$$\frac{781 \text{ mmHg}}{760 \text{ mmHg}} \left| \frac{1 \text{ atm}}{1} \right| = 1.03 \text{ atm}$$

D. 15.2 psi

$$\frac{15.2 \text{ psi}}{14.69 \text{ psi}} \left| \frac{1 \text{ atm}}{1} \right| = 1.03 \text{ atm}$$

Convert the following pressures into mm Hg

A. 8.22 torr $\frac{822 \text{ torr}}{1 \text{ torr}} \times \frac{1 \text{ mmHg}}{1 \text{ torr}} = 822 \text{ mmHg}$

B. 121.4 kPa $\frac{121.4 \text{ kPa}}{101.325 \text{ kPa}} \times \frac{1 \text{ atm}}{1 \text{ atm}} \times \frac{760 \text{ mmHg}}{1 \text{ atm}} = 910.6 \text{ mmHg}$

C. 1.14 atm $\frac{1.14 \text{ atm}}{1 \text{ atm}} \times \frac{760 \text{ mmHg}}{1 \text{ atm}} = 866.4 \text{ mmHg}$

D. 9.75 psi $\frac{9.75 \text{ psi}}{14.69 \text{ psi}} \times \frac{1 \text{ atm}}{1 \text{ atm}} \times \frac{760 \text{ mmHg}}{1 \text{ atm}} = 504.4 \text{ mmHg}$

Convert the following pressures into pascals

A. 774 torr

$$\frac{774 \text{ torr}}{760 \text{ torr}} \times \frac{1 \text{ atm}}{1 \text{ atm}} \times \frac{101,325 \text{ Pa}}{1 \text{ atm}} = 103,191.5 \text{ Pa}$$

B. 0.965 atm

$$\frac{0.965 \text{ atm}}{1 \text{ atm}} \times \frac{101,325 \text{ Pa}}{1 \text{ atm}} = 97,778.6 \text{ Pa}$$

C. 112.5 kPa

$$\frac{112.5 \text{ kPa}}{1 \text{ kPa}} \times \frac{1 \times 10^3 \text{ Pa}}{1 \text{ kPa}} = 112,500 \text{ Pa}$$

D. 801 mm Hg

$$\frac{801 \text{ mmHg}}{760 \text{ mmHg}} \times \frac{1 \text{ atm}}{1 \text{ atm}} \times \frac{101,325 \text{ Pa}}{1 \text{ atm}} = 106,791.2 \text{ Pa}$$