10 $V_1 = 100L$

$P_1 = 960mmHg = 1\ atm$

$P_2 = 2\ atm$

$V_2 = \frac{1 \times 1}{2}$

= ~~0.5 atm~~

0.5L

11

$P_1V_1 = P_2V_2$

$\frac{1.04 \times 759}{224}$

352.39 mmHg

12

(a) $P_1V_1 = P_2V_2$

$\frac{6 \times 2}{3} = 4$

$P_2 = 4\ atm$

(b) $P_1V_1 = P_2V_2$

$\frac{6 \times 3}{10} =$

$P_2 = 1.8\ atm$

c

$\frac{5 \times 10}{15} = \frac{10}{3}$

$P_1 = = 3\frac{1}{3} = 3.333\ atm$

d $\frac{4 \times 2}{8} = \frac{8}{8}$

12 e

$\frac{15 \times 20}{10}$

$V_1 = 30L$

Boyle's law worksheet

1

~~$P_1V_1 = P_2V_2$~~ $PV = k$ or $P = \frac{k}{V}$

2. ~~Pressure~~ Absolute pressure of a given mass of a gas.

3 Units of P - Atmospheres, Pascal,

4 V - volume of a given mass of a gas.

5 Units of V - metres per second.

6 $P_1V_1 = P_2V_2$

$\frac{2 \times 12}{3} = V_2$

$= 8$ atm

8

$P_1V_1 = P_2V_2$

$\frac{2800 \text{ ml} \times 2 \text{ atm}}{8 \text{ atm}}$

4 800 mL

7 $P_1V_1 = P_2V_2$

$\frac{10 \times 5}{20}$

$= 2.5$ atm

8 $P_1V_1 = P_2V_2$

$\frac{10 \times 1400}{5}$

2800 torr