

## Boyle's Law Worksheet

1. To compress nitrogen at 1 atm from 750 mL to 500 mL, what must the new pressure be if the temperature is kept constant?
2. What would be the new volume if the pressure on 600 mL is increased from 90 kPa to 150 kPa?
3. If oxygen at 128 kPa is allowed to expand at constant temperature until its pressure is 101.3 kPa, how much larger will the volume become?
4. A sample of nitrogen at 101.3 kPa with a volume of 100. mL is carefully compressed at constant temperature in successive changes in pressure, equaling 5.0 kPa at a time, until the final pressure is 133.3 kPa. Calculate each new volume and prepare a plot of P versus V, showing pressure on the x axis. (Show your work on the back and the answers on this side!)

Pressure (kPa)	Volume (mL)
101.3 kPa	100. ml
133.3 kPa	

