

Gas Laws: Many Units of Pressure

1. Numerical response question

Left justify your answer in the boxes provided below

--	--	--	--

A constant amount of gas at a constant temperature is placed under the following pressure conditions to observe changes in volume. Arrange the given data from the pressure that would produce the smallest volume to the pressure that would produce the largest volume.

- Condition 1 1 atm
- Condition 2 1 Pa
- Condition 3 1 mmHg
- Condition 4 1 kPa

2. Numerical response question

Left justify your answer in the boxes provided below

--	--	--	--

A 1.000 kg cylinder exerts a pressure of 7.43 kPa on the surface beneath it. What pressure, expressed in Torr, does this cylinder exert on the surface beneath it?

3. A 1.50 L sample of gas at 2.25 atm pressure expands to a final volume of 8.10 L. The final gas pressure will be ___ mm of Hg.
- a. 9.23×10^3
 - b. 317
 - c. 1.71×10^3
 - d. 141
4. Calculate the height of a column of liquid mercury in millimetres required to exert a pressure of 151.0 kPa.
- a. 1132 mmHg
 - b. 1133 mmHg
 - c. 1147 mmHg
 - d. 1148 mmHg

5. Numerical response question

--	--	--	--

Left justify your answer in the boxes provided.

A volume of ideal gas is under 130 kPa of pressure. This is equivalent to ____ atm of pressure.

6. Numerical response question

--	--	--	--

Left justify your answer in the boxes provided.

The weather forecast shows an atmospheric pressure of 125 kPa. This is equivalent to ____ torr.

7. **Numerical response question**

--	--	--	--

Left justify your answer in the boxes provided.

A volume of ideal gas is under 900 torr of pressure. This is equivalent to ____ kPa of pressure.

8. **Numerical response question**

--	--	--	--

Left justify your answer in the boxes provided.

The weather forecast shows an atmospheric pressure of 1.25 atm. This is equivalent to ____ kPa.

Answers:

1. 1432
2. 55.7
3. B
4. B
5. 1.28
6. 938
7. 120
8. 127