

Boyle's Law Program

Robert Boyle 1627-1691

Quiz

No.	Answer	Comments
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

Notes

Discussion

- (a) If it is the same amount of gas in both bubbles, what is wrong with this image?

♦



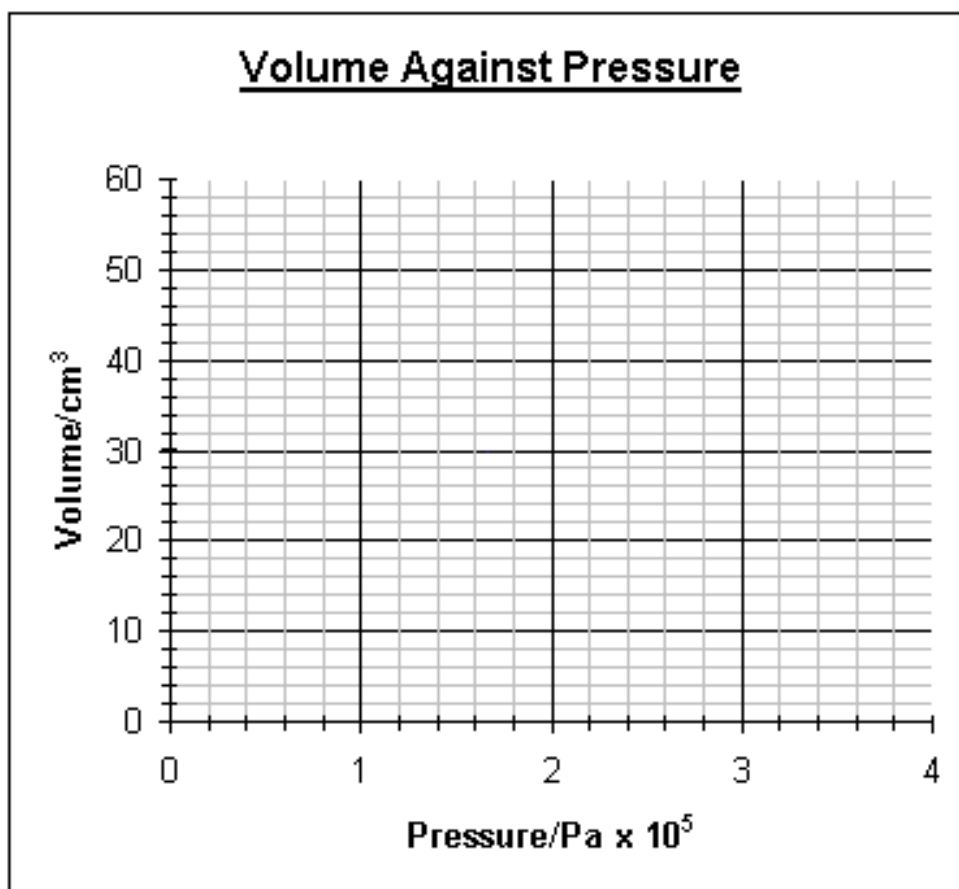
- (b) Where are gases kept under pressure in everyday life?

Boyle's Law Worksheet

Use the program to fill in the values

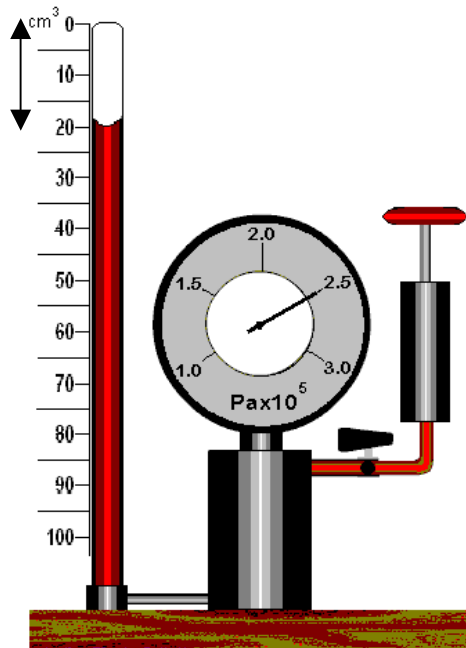
$P/1 \times 10^5 \text{ Pa}$	V/cm^3	$P \times V/1 \times 10^5 \text{ Pa}$
1.0		

Now try plotting the graph.



Boyle's Law Experiment

Diagram (Please label the apparatus)



Method

Results

$P/1 \times 10^5 \text{ Pa}$	V/cm^3	$P \times V/1 \times 10^5 \text{ Pa cm}^3$
1.0		

Conclusion

Boyle's Law Problems/Homework/Test

1. Define Boyle's Law

2. In the Boyle's Law experiment you can have:
(Tick ✓ the correct statements.)

High Pressure and Low Volume	<input type="checkbox"/>
Low Pressure and Low Volume	<input type="checkbox"/>
High Pressure and High Volume	<input type="checkbox"/>
Low Pressure and High Volume	<input type="checkbox"/>

3. A bicycle pump has its outlet closed off, and it contains air at a volume of 50 cm^3 and pressure of $1.0 \times 10^5 \text{ Pa}$. If the volume is reduced to 12.5 cm^3 , what will be the new pressure?

4. A fish in deep water at a pressure of 5 atmospheres releases a bubble of volume 2 cm^3 . Calculate the volume of the bubble just before it breaks the surface (assume the pressure will now be 1 atmosphere.)

5. A helium balloon at sea-level has a volume of 33 m^3 at a pressure of $1.0 \times 10^5 \text{ Pa}$. When released into the upper atmosphere its volume becomes 50 m^3 . What is the new pressure?