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Crash Course Chemistry #14: Real Gases

Name: _____ Date: _____

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1. The Ideal Gas Law is expressed by the formula _____.
2. The constant used in the Ideal Gas Law is denoted by the letter _____.
3. The Ideal Gas Law assumes that gas molecules do not _____ each other.
4. The Ideal Gas Law breaks down under conditions of high _____ and low _____.
5. The correction for volume in the van der Waals equation accounts for the _____ of gas particles.
6. The volume correction constant in the van der Waals equation is represented by the letter _____.
7. The pressure correction in the van der Waals equation accounts for _____ between molecules.
8. The pressure correction constant in the van der Waals equation is denoted by the letter _____.
9. The van der Waals equation is most useful when the gas is at high _____ and low _____.
10. In real gases, volume is not just the container's volume; it must exclude the volume taken up by the _____.
11. The Ideal Gas Law assumes gases are made up of _____ particles with no volume.
12. The van der Waals equation includes corrections for _____ and _____.
13. When pressure is corrected in the van der Waals equation, it includes the factors n and V , both of which are _____.
14. The discrepancy between the Ideal Gas Law and van der Waals equation becomes significant in _____ containers.
15. The van der Waals equation demonstrates that real gases _____ from ideal behavior under extreme conditions.

Crash Course Chemistry #14: Real Gases KEY

1. The Ideal Gas Law is expressed by the formula $PV = nRT$.
2. The constant used in the Ideal Gas Law is denoted by the letter R .
3. The Ideal Gas Law assumes that gas molecules do not **attract** each other.
4. The Ideal Gas Law breaks down under conditions of high **pressure** and low **temperature**.
5. The correction for volume in the van der Waals equation accounts for the **size** of gas particles.
6. The volume correction constant in the van der Waals equation is represented by the letter **b**.
7. The pressure correction in the van der Waals equation accounts for **attractions** between molecules.
8. The pressure correction constant in the van der Waals equation is denoted by the letter **a**.
9. The van der Waals equation is most useful when the gas is at high **pressure** and low **temperature**.
10. In real gases, volume is not just the container's volume; it must exclude the volume taken up by the **particles**.
11. The Ideal Gas Law assumes gases are made up of **point** particles with no volume.
12. The van der Waals equation includes corrections for **volume** and **pressure**.
13. When pressure is corrected in the van der Waals equation, it includes the factors n and V , both of which are **squared**.
14. The discrepancy between the Ideal Gas Law and van der Waals equation becomes significant in **small** containers.
15. The van der Waals equation demonstrates that real gases **deviate** from ideal behavior under extreme conditions.

15 Questions

Answer Key Included

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