faster and occupy more space)

Problem with the theory: low pressure and at high pressure gases condense



Formula : V1/T1 = V2/T2

-temperature should be in kelvins and volume in litres.

-273

*can't use celsius because you cannot have negative volume

Kelvin Scale (K)

C --> K = +273

-unit used to measure temperature but has no regative value.

*Absolute zero: 0K or -273 degrees celsine the lowest possible temperature - molecules do no move

example 1: a sample of nitrogen gas surrouding a circuit board occupies a volume of 300 ml at 17 degrees celsius. What volume will the nitrogen occupy at 100 degrees celsius if the pressure remains constant

Given : T1 = 17degrees Celsius + 273 = 290 K

T2 = 100 dC + 273 = 373K

Solution: V1/ T1 = V2/ T2

300ml/290 = V2/373

V2 = 385.86 ml

example 2: a 14.5 cm³ sample of O2 gas at 24.3 dCelsius is drawn into a syringe with a max volume of 60 cm³. What is the max temperature of O2 gas?

 $*1cm^{3} = 1ml$

Given: V1: 14.3 cm³