

Quiz 7.3 – Gas Kinetics

Name: _____

Problem 1 (2 points)

The temperature in Cedar city can range over the year from $-10\text{ }^{\circ}\text{C}$ and $35\text{ }^{\circ}\text{C}$

Find the v_{rms} for nitrogen gas at $-10\text{ }^{\circ}\text{C}$ and $35\text{ }^{\circ}\text{C}$

Problem 2 (2 points)

Two identical balloons are each filled with gas to equal volumes. One balloon contains He and the other contains O_2 . Identical pinholes are punched into both balloons at the same time, and it takes 73 s for the He balloon to deflate to half its initial volume. How long would you predict it will take the O_2 balloon to deflate to half its original volume?

Problem 3 (1 point)

The van Der Waals equation improves the ideal gas law by adding in two new parameters: a and b

Briefly describe what physical properties each of these two parameters relates to:

a :

b :

God Says Yes to Me

By Kaylin Haught

I asked God if it was okay to be melodramatic
and she said yes
I asked her if it was okay to be short
and she said it sure is
I asked her if I could wear nail polish
or not wear nail polish
and she said honey
she calls me that sometimes
she said you can do just exactly
what you want to
Thanks God I said
And is it even okay if I don't paragraph
my letters
Sweetcakes God said
who knows where she picked that up
what I'm telling you is
Yes Yes Yes