Name Selected Answers Period _____

College Prep Chemistry of the Earth

Assignment 7K – *Ideal Gas Law* 20 Points

Complete the following problems based on the ideal gas law $PV = nRT$

Ideal Gas Law Forms				
$PV = nRT$	$P = \frac{nRT}{V}$ (atm)	$V = \frac{nRT}{P}$ (L)	$n = \frac{PV}{RT}$ (mol)	$T = \frac{PV}{nR}$ (K)
Ideal Gas Constant [*R*]	$R = 0.0821 \frac{L \cdot atm}{mol \cdot K}$			

include Units

$T = \frac{PV}{nR}$

P = 1.48atm, V = 32.48L, n = 2.45mol, T = ____K

T = $1.48\,atm \cdot 32.48\,L$

use ( ) on Calc! → $(2.45\,mol \cdot 0.0821 \frac{L \cdot atm}{mol \cdot K})$

T = 238.98 K

P = 6.39atm, V = 21.82L, n = ____mol, T = 428.43K

n = _____

n = _____

$P = \frac{nRT}{V}$

P = ____atm, V = 26.74L, n = 0.93mol, T = 327.38K

P = $0.93\,mol \cdot 0.0821 \frac{L \cdot atm}{mol \cdot K} \cdot 327.38\,K$ ← Final Unit

26.74 L

P = 0.93 atm

P = 0.82atm, V = ____L, n = 0.52mol, T = 283.58K

V = _____

V = _____

P = 3.47atm, V = 51.93L, n = ____mol, T = 475.25K

n = _____

n = _____

P = 5.27atm, V = ____L, n = 4.38mol, T = 538.49K

V = _____

V = _____