Pressure & Temperature

Name: _____

*Show set up and all work (including units) to receive full credit.

1) The air pressure inside a submarine is 0.72 atm. What would be the height of a mercury column inside the submarine?

2) The recommended air pressure in a certain tire is 242 kPa. What is this pressure in atmospheres?

3) An experiment in a lab is performed at a pressure of 749.1 mm Hg. What is this pressure in torr?

4) What would be the pressure of a room be if the mercury read 850 mm Hg in torr, atmospheres, psi and in kPa?

7) Fill in the data table with appropriate values by performing temperature conversions:

Fahrenheit (^{O}F)	Celsius (^{O}C)	Kelvin (K)
		373
	37	
32		
	25	
85		
		0

Pressure & Temperature

Name: _____

*Show set up and all work (including units) to receive full credit.

1a) A bag of potato chips is sealed in a factory at a pressure of 769 mm Hg. What is this pressure in pascals?

b) The bag of chips is shipped to a town in Colorado, where the air pressure is 0.94 atm. What is the difference in pressure (in kPa) between the pressure in the bag and the atmospheric pressure in the town?

2) Complete the following pressure conversions:

a) 32.0 psi --> atm

c) 1960 mm Hg --> kPa

b) 25025 Pa --> torr

d) 5.11 atm --> psi

3) Fill in the data table with appropriate values by performing temperature conversions:

Fahrenheit (^{O}F)	Celsius (^{O}C)	Kelvin (K)
		325
65		
		-54
	-178	
-30		
	-40	
-475		

Pressure & Temperature

Name: _____

*Show set up and all work (including units) to receive full credit.

1a) A helium balloon is released from the ground where the atmospheric pressure today is 14.3 psi. How many atmospheres is this?

b) The balloon floats to an altitude of 70,000 ft where the pressure is 41 kPa. What is the difference between the two altitudes in atmospheres?

2) Complete the following pressure conversions:

a) 32.0 atm --> psi

c) 1960 torr --> Pa

b) 52025 Pa --> mmHg

d) 192 kPa --> atm

3) Fill in the data table with appropriate values by performing temperature conversions:

Fahrenheit (^{O}F)	Celsius (^{O}C)	Kelvin (K)
450		
		322
		-27
123		
	-25	
-40		
	-271	