

Today:

- 1) Check homework
- 2) Start the Elephant Skateboard sheet (see partial answers below)
- 3) Pass back the test (see Infinite Campus)

A short impromptu discussion followed about whether “astronauts exist” ...

make a poster to explain a gas property

Chemistry: <http://genest.weebly.com>

Stop in for help every day at lunch and Tues, Weds., & Thurs after school!

After-hours question? Email me at home: egenes@madison.k12.wi.us



Name _____

Period _____

Save this sheet as notes to study and memorize the numbers.

- List four common units used for measuring pressure: atm mmHg kPa Pa
- Write the words that the name STP stands for standard temperature + pressure
- The temperature in °C at STP is 0°C
- The pressure in atmospheres at STP is 1.0 atm
- Write the temperature of absolute zero in
 - kelvins: zero
 - °C: -273°C
- Convert each temperature to the missing temperature:
 - 283 kelvins = 10°C
 - 200 kelvins = -73 °C
- If a scuba diver fills her scuba tank with air at 322 kPa at ~~300 K~~ 31°C, what pressure will her tank of air be at the bottom of the ocean where it is 15 °C?

$$31 + 273 = \del{304} 304$$

$$15 + 273 = 288 \text{ K}$$

$$\frac{P_1}{T_1} = \frac{P_2}{T_2}$$

~~$$\frac{P_1}{T_1} = \frac{P_2}{T_2}$$~~

$$P_2 = \frac{P_1 T_2}{T_1}$$

$$P_2 = \frac{(322 \text{ kPa})(288 \text{ K})}{(304 \text{ K})}$$

answer = ?

- If a spray paint can is initially at 400. kelvins and initial pressure is 1200. mmHg, what will the new pressure in mmHg if the paint can is cooled to 300. kelvins?
- [Watch out on this one for two tricky units!] If a scuba diver fills her scuba tank with air at 230.0 atm at Standard Temperature and then changes the temperature
 - what pressure will her tank of air be at the bottom of the ocean where it is ~~12°C~~ 12°C?
 - Find the volume of her scuba gas if she reduced the temperature of her tank to "absolute zero."