(6)(a) $78.4\ L\ Ne \times \frac{1\ mol}{22.4\ L} \times \frac{20.2\ g}{1\ mol} = 70.7\ g\ Ne$

(b) $3 \times 10^{23}\ molecules\ N_2 \times \frac{1\ mol}{6.02 \times 10^{23}\ molec.} \times \frac{28\ g\ N_2}{1\ mol} = 14\ g\ N_2$

(c) $20.0\ L\ O_2 \times \frac{1\ mol}{22.4\ L} \times \frac{32.0\ g}{1\ mol} = 28.6\ g\ O_2$

(7) Particles stop moving at absolute zero (−273°C, 0 K)

(8) During a state change, temp does not change; all the heat energy goes into changing the state of matter.

(9) Allotropes are different forms of a crystalline solid (graphite + diamond are great examples) (both carbon)

(10) Sublimation: Conversion from solid to gas without passing through the liquid state first. (CO_2 does this)

(11) Temp. + pressure are shown on a phase diagram.

Ch. 12

(1) Pumping air increases the number of air particles inside the tire, thus increasing pressure.

(2) Squeezing a balloon decreases the volume, and the particles collide more often with the sides of the balloon, thus increasing pressure.

(3) Heated a gas makes particles move faster, and they collide more often (and increase pressure)

(4) An ideal gas obeys the assumptions of kinetic theory; a real gas does not.