Answer key for Spring Final Review Part #4

1. 7.6 mol
2. 4.8 mol
3. 339.5 g
4. 39.2 g
5. 1.59 x 108
6. Exo
7. Endo
8. Exo
9. Endo = melting, boiling Exo = freezing, burning
10. 71.08 J
11. 0.63 J/gC
12. 266.7 C
13. 12094 J
14. 122724 J
15. 9410.55 J
16. Thermo = energy, Kinetics = speed
17. See p.225 in your notebook
18. See p. 225 in your notebook
19. Temp, concentration, surface area, catalyst
20. Skipped
21. Skipped
22. Skipped
23. Molecules need to collide hard enough, and in the correct orientation in order to react
24. Change in temp means the particles go faster and will hit harder and more often, changing the concentration means more particles present so more chance for effective collisions to happen
25. Catalyst is a chemical that is added to a reaction in order to lower the activation energy so a reaction goes faster. It does not get used up during the reaction. See p. 227 for a diagram you drew in your notes
26. Negative because it is a reactant and is getting used up
27. –(0M-0.4M)/(20sec-0sec) = 0.02M/sec (careful to see the double negatives canceling out since the oxygen is a reactant!)
28. (1.5M-0M)/(5.42sec-0sec) = 0.28M/sec (no negative in the equation because it is a product that is being made!)