

Blitz Ch 10 & 11, Form T-Z

Name _____ Period _____

This is a Take Home Exam. You may use your notes but you may NOT use help from human beings.

EXPLAIN IN COMPLETE SENTENCES AND GIVE EXAMPLES:

You MUST HAND WRITE THIS EXAM!! NO TYPED PAPERS WILL BE ACCEPTED!

1. Discuss **TEN** of the fifteen shocks of *Vapor Pressure and Boiling Point* and give an example of each.
2. Draw the warming curve for water, label its parts, and tell what is happening at each of the **FIVE** positions.
3. Discuss and explain **FIVE** devices for measuring temperature.
4. Describe the **TWO** Laws of Thermodynamics, and give an example of each. and what are *Maxwell's Demon* and *Boltzman's Statistics*.
5. Explain how **THREE** types of fog are produced. Include *adiabatic* in your explanations.

***** SHOW METHOD OF SOLUTION FOR ALL PROBLEMS (The 1,2,3,4!)**

6. A piece of Cu wire is 4.32 m long at 34.0°C. Find its increase in length at 38.9°C. $\alpha = 1.68 \times 10^{-5}$.
7. If 45.5 g of water at 14.3°C is mixed with 67.5 g of water at 37.9°C, find the final temperature.
8. Find the number of joules obtained by burning 30.0 liters of gasoline. Density of gasoline = 0.700 g/cm³, and it liberates 1.15×10^4 cal/g. 1cal = 4.18 j. 1 L =1000 cm³.
9. Find the total number of calories needed to change 14.0 g of ice at -55.3°C to steam at 145.0°C. Show all **FIVE** steps. [See sample problem.](#)
10. A piece of metal massing 119.0 g at a temperature of 100.0°C is dropped into 98.2 g of water at 22.3°C. The final temperature of the mixture is 31.3°C. Find the specific heat of the metal.

STUFF:

Heat Lost = Heat Gained	sp.ht. ice = 0.530 cal/g.C ^o
$\Delta l = \alpha l \Delta t$	sp.ht. water = 1.00 cal/g.C ^o
$Q = mc\Delta t$	sp.ht. steam = 0.481 cal/g.C ^o
ht.fus. ice = 80.0 cal/g	ht.vap. water = 538 cal/g

When finished, please STAPLE this exam onto your papers and turn in on due date.