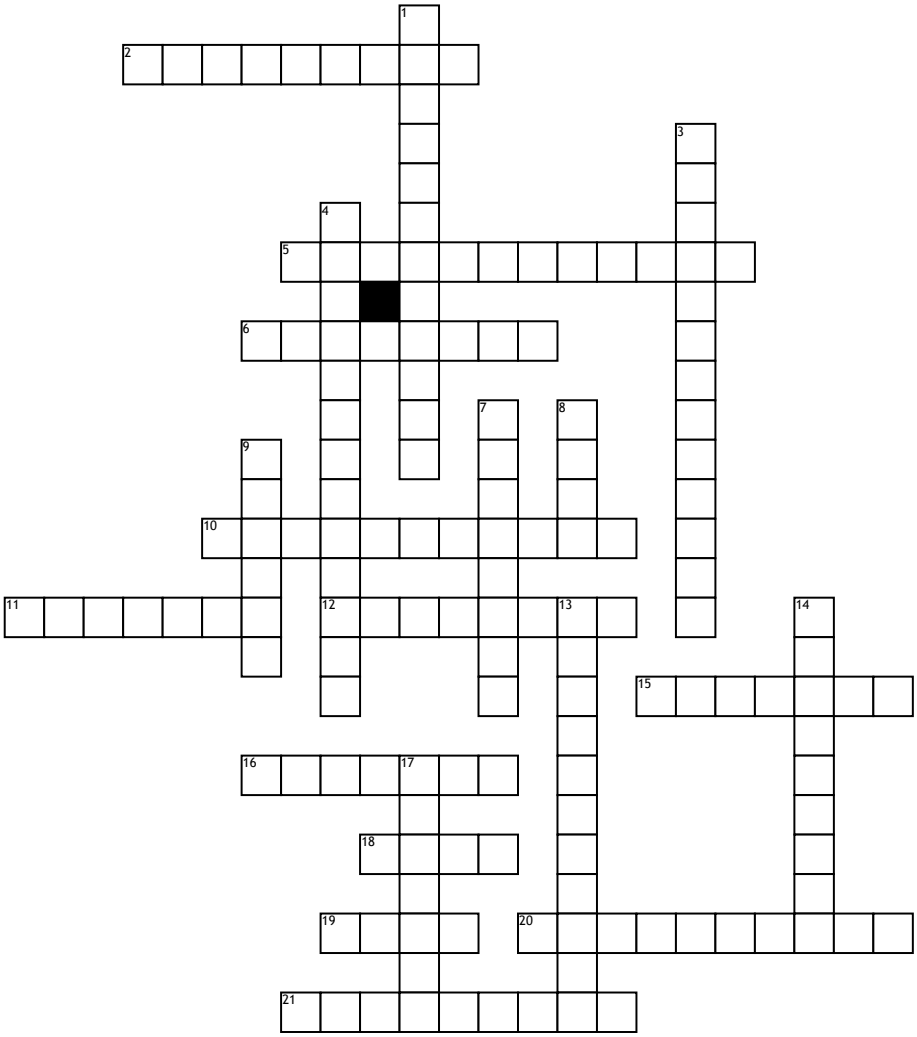
Name: _____ Date: _____

Thermodynamics



Across

2. A _____ liquid is a liquid where the temperature is lower than the saturation temperature for a given pressure.

5. According to the second law of thermodynamics, the entropy of a closed adiabatic system increases if the process is _____ .

6. What thermodynamic variable is constant when carbon dioxide is passed through a throttle valve?

10. Work is positive during _____ of a gas.

11. If reversible, what part of the rankine cycle has a constant entropy?

12. What is the term used when referring to constant pressure?

15. What do we call the fraction of dry vapor in a mixture of saturated liquid and saturated vapor?

16. A reversible process yields the _____ possible heat into the system.

18. Positive Q= heat __ the system

19. What part of the rankine cycle do we often neglect when calculating the work done by the system?

20. The _____ efficiency for a process in which the system does work is defined as: n= |Wactual|/|Wreversible|

21. What is the name of the thermodynamic potential "A"?

Down

1. The coefficient of performance for a(n) _____ is defined as |Q2|/ |W|

3. What is the name of the variable μ?

4. What is the point at which the difference between liquid and vapor densities disappears?

7. If a closed system undergoes a cyclic process, the entropy of the system remains _____ .

8. The internal energy change for an isolated system undergoing a constant temperature process is ____ only if the system is an ideal gas.

9. Potential energy, internal energy, and kinetic energy are all what type of energy?

13. The entropy change of a system going from state 1 to state 2 is the same regardless of whether the process is reversible or irreversible because it is path _____.

14. What is the term for when q=0?

17. The surroundings deliver _____ work to the system in a reversible process.

Word Bank

constant	mechanical	quality	irreversible	adiabatic
refrigerator	critical point	Joule Thompson	minimum	independent
turbine	maximum	zero	enthalpy	compression
isobaric	into	stored	Helmholtz	pump
subcooled				