

MEMS 0051 - Introduction to Thermodynamics  
Quiz #1

Name: [Solution](#)

**Problem #1**

Determine the *phase* of water at the following states:

(a)  $-50\text{ }^{\circ}\text{C}$ ,  $1,000\text{ [kPa]}$

[Solid](#)

(b)  $25\text{ }^{\circ}\text{C}$ ,  $10,000\text{ [MPa]}$

[Solid](#)

(c)  $50\text{ }^{\circ}\text{C}$ ,  $10,000\text{ [kPa]}$

[Liquid](#)

(d)  $325\text{ }^{\circ}\text{C}$ ,  $10\text{ [kPa]}$

[Vapor](#)

(e)  $600\text{ }^{\circ}\text{C}$ ,  $100\text{ [MPa]}$

[Supercritical Fluid](#)

(f)  $0.01\text{ }^{\circ}\text{C}$ ,  $101.325\text{ [kPa]}$

[Solid+Liquid](#)

