**Skill 37.02 Problem 1**

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| The melting point of an unknown substance is -20oC and the boiling point is 76oC. Sketch the heating curve for this substance. On the curve,   1. label the “x” and “y” axis 2. indicate the melting point 3. indicate the boiling point |
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**Skill 37.03 Problem 1**

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| The cooling curve for a pure substance is shown below.     1. What is the freezing point of the substance, how do you know? 2. During which interval is the liquid phase in equilibrium with the solid phase? 3. During which interval do the liquid and solid phases coexist? |
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**Skill 37.04 Problem 1**

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| Predict the changes on the following liquid-vapor equilibrium,  H2O(*l*) ⮀ H2O(*g*)   1. an increase in temperature 2. an increase in pressure 3. an increase in volume |
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**Skill 37.05 Problem 1**

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| The phase diagram for a pure substance is shown above. Use this diagram and your knowledge about changes of phase to answer the following questions.   1. What does point V represent? What characteristics are specific to the system only at point V? 2. What does each point on the curve between V and W represent? 3. Describe the changes that the system undergoes as the temperature slowly increases from X to Y to Z. 4. In a solid-liquid mixture of this substance, will the solid float or sink? Explain. |
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