

First name \_\_\_\_\_ Last name \_\_\_\_\_ ID \_\_\_\_\_

### **Assignment 3**

#### **(Entropy change)**

1. A  $0.5\text{-m}^3$  rigid tank contains refrigerant-134a initially at 200 kPa and 40 percent quality. Heat is transferred now to the refrigerant from a source at  $35^\circ\text{C}$  until the pressure rises to 400 kPa. Determine (a) the entropy change of the refrigerant, (b) the entropy change of the heat source, and (c) the total entropy change for this process.