Heat Practice Problems

T­f= (T1+T2) cal = m x T T= Tf - Ti

2

**Complete the following heat transfer problems. Make sure to show all work and that all numbers have units!**

1. Mix 44 mL of water at 5⁰C and 44 mL of water at 50⁰C
   1. What is the final temperature
   2. What is the change in temperature for the cold water?
   3. How much heat energy transferred to the cold water?
   4. What is the change in temperature for the hot water
   5. How much heat energy transferred to the hot water?
2. Mix 42 mL of water at 1⁰C and 42 mL of water at 55⁰C
   1. What is the final temperature
   2. What is the change in temperature for the cold water?
   3. How much heat energy transferred to the cold water?
   4. What is the change in temperature for the hot water
   5. How much heat energy transferred to the hot water?

3. How many calories of heat are required to raise the temperature of 550 g of water from 12⁰C to   
 18⁰C?

4. How much heat is lost when 640g of water cools from 100⁰C to 26⁰C?