Calculating Change in Thermal Energy

cwater = 4187 J/kgC cice = 2090 J/kgC csteam = 1840 J/kgC

hf(water) = 3.35 x 105 J/kg hv(water) = 2.26 x 106 J/kg

Find Qtotal for the following if all masses are .5kg:

1. 21˚C water to 88˚C water

2. -15˚C ice to 25˚C water

3. 112˚C steam to 45˚C water

4. 273 K water to 373 K water

5. 0˚C ice to 100˚C steam

6. 55˚C water to -45˚C ice

7. 0˚C ice to 145˚C steam

8. 200˚C steam to -5˚C ice

9. -20˚C ice to 112˚C steam

10. 98˚C water to 23˚C water