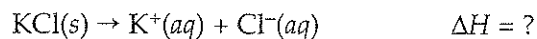


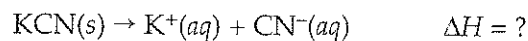
## 12-4 Practice Problems

---

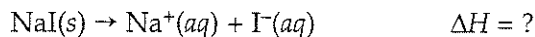
1. When a 12.8-g sample of KCl dissolves in 75.0 g of water in a calorimeter, the temperature drops from 31.0°C to 21.6°C. Calculate  $\Delta H$  for the process.
6. What is the specific heat of gold if the temperature of a 8.21-g sample of gold is increased by 6.2 C° when 6.51 J of heat is added?



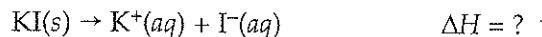
2. What is the specific heat of aluminum if the temperature of a 28.4-g sample of aluminum is increased by 8.1 C° when 207 J of heat is added?
7. When a 19.2-g sample of KCN dissolves in 65.0 g of water in a calorimeter, the temperature drops from 28.1°C to 15.4°C. Calculate  $\Delta H$  for the process.



3. When a 25.7-g sample of NaI dissolves in 80.0 g of water in a calorimeter, the temperature rises from 20.5°C to 24.4°C. Calculate  $\Delta H$  for the process.
8. What is the specific heat of silver if the temperature of a 15.4-g sample of silver is increased by 11.2 C° when 40.5 J of heat is added?



4. What is the specific heat of silicon if the temperature of a 4.11-g sample of silicon is increased by 3.8 C° when 11.1 J of heat is added?
9. When a 28.7-g sample of KI dissolves in 60.0 g of water in a calorimeter, the temperature drops from 27.2°C to 13.2°C. Calculate  $\Delta H$  for the process.



5. When a 16.9-g sample of NaOH dissolves in 70.0 g of water in a calorimeter, the temperature rises from 22.4°C to 36.6°C. Calculate  $\Delta H$  for the process.
10. What is the specific heat of titanium if the temperature of a 36.7-g sample of titanium is increased by 4.8 C° when 91.6 J of heat is added?

