

- 38) What is the freezing-point depression of an aqueous solution of 10.0 grams of glucose ( $C_6H_{12}O_6$ ) in 50.0 grams of water?
- 39) Calculate the freezing-point depression of a benzene solution containing 400 grams of benzene and 200 grams of the molecular compound acetone ( $C_3H_6O$ ). The  $K_f$  for benzene is  $5.12^\circ C/m$ .
- 40) What is the boiling point of a solution that contains 1.25 mol  $CaCl_2$  in 1400 grams of water?
- 41) What mass of NaCl would have to be dissolved in 1.000 kg of water to raise the boiling point by  $2.00^\circ C$ ?
- 46) What is the freezing point of a solution of 12.0 grams of  $CCl_4$  dissolved in 750.0 grams of benzene? The freezing point of benzene is  $5.46^\circ C$  (we are used to water freezing at  $0^\circ C$ , so be careful in how you work that end).  $K_f = 5.12^\circ C/m$