1. **10 points** (taken from question 4 on p. 16) Allen, Bob, Christie, and Danielle are going to form a band. There are four positions: vocals, percussion, guitar, and kazoo.

   (a) **5 points** Assume that all of the band members can do all positions in the band. How many different arrangements are possible?

   (b) **5 points** Assume that Allen can only play percussion or kazoo. How many arrangements are possible?
Answers

1. (a) $4!$
   
   (b) $2 \times 3!$