1. This is question 7 on page 16 of the book.
   
   (a) 2 points How many ways can we seat 3 boys and 3 girls in a row?

   (b) 2 points How many ways can we seat 3 boys and 3 girls in a row if the boys and girls are each to sit together?

   (c) 3 points How many ways can we seat 3 boys and 3 girls in a row if only the boys must sit together?

   (d) 3 points How many ways can we seat 3 boys and 3 girls in a row if no two people of the same sex are allowed to sit together?
Answers

1. (a) 6!
   (b) $2 \times 3! \times 3!$ (the 2 comes from which gender is left-most)
   (c) $4 \times 3! \times 3!$ (the 4 comes from the position of the left-most boy)
   (d) $2 \times 3! \times 3!$ (the two comes from which gender is left-most).